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PART II

RESULTS OF OBSERVATIONS MADE WITH THE SEVEN-INCH TRANSIT CIRCLE 1967 - 1973

**OBSERVATIONS OF THE MOON AND MINOR PLANETS
CATALOG OF 23,001 STARS FOR 1950.0
COMPARISONS WITH FK4**

**By
J.A. HUGHES, C.A. SMITH, and R.L. BRANHAM**

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* Individual Astronomisches Rechen-Institut differences
(FK4 - FK5) in the system of FK4 were applied to each FK4 star.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

INTRODUCTION

Program - This volume contains the results of observations made with the seven-inch transit circle during the period 1967.1 to 1973.5, while the instrument was located in Argentina at the Yale-Columbia Southern Observatory (known now as the Carlos V. Cesco High Altitude Station), operated in collaboration with the University of Cuyo (now the University of San Juan) at San Juan. This catalog will be designated WL50, where "L" stands for El Leoncito, the name of the estancia within whose boundaries the observatory is located. The program has been described in an article by J.A. Hughes, (*Astronomical Journal*, Vol. 72, No. 5, pages 556-568), in the proceedings of an astrometric conference held at the University of Maryland 3-5 October 1966. The program included:

1. Observations of Ceres, Pallas, Juno, Vesta, 233 clock stars in the declination zone $+30^{\circ}$ to -30° , and 33 azimuth stars within 12° of the south pole,
2. Four observations of each Southern Reference Star, except that stars in the zone $+5^{\circ}$ to -20° were observed only twice,
3. Four lower culmination observations of each Southern Reference Star in the zone -75° to -90° ,
4. Six observations each of 165 stars in the Scorpio - Centaurus Association,
5. At least six observations each of all stars in the Fourth Fundamental Catalogue (FK4) and the supplement to the FK4 (FK4 Sup) from $+30^{\circ}$ to -90° and -90° to -70° at lower culmination,
6. Selected double stars given by G. Van Herk in the zone from $+30^{\circ}$ to -10° ,
7. Observations of the Moon starting on 24 February 1972, in the final months of the program.

The complete observing list consisted of 23275 stars, of which 877 were also observed at lower culmination. The four minor planets, FK4, clock, and azimuth stars were observed repeatedly throughout the entire program.

Approximately 155,500 observations were made during the program, distributed as follows:

Minor Planets	1047	FK4-UC	39591
Clock stars	19366	FK4-LC	1989
Azimuth stars-UC	6497	FK4 Sup-UC	7790
Azimuth stars-LC	6282	FK4 Sup-LC	1663
Moon	113	SRS-UC	68390
		SRS-LC	2770

where the notations "UC", "LC" refer to upper and lower culmination respectively.

Personnel - The program of observations was started under the direction of F.P. Scott and continued until his retirement on 12 June 1970. The program of observations was completed and the fundamental discussion of the observations was begun under the direction of J.L. Schombert until his retirement on 8 April 1977. Discussion of the observations was completed under the direction of J.A. Hughes.

Preliminary reductions and the formation of ($O - C$)'s were carried out by the observers in Argentina, and by personnel in Washington using computer programs developed by T.E. Corbin. However, it was not until the observing program was completed in June 1973 and all observations were in hand and available in computer-readable form in April 1976 that a final discussion and reduction according to fundamental principles could be carried out.

The observers are listed in Table 1 in chronological order of their first observations. The numerals represent the code adopted to identify each observer when the material was put into computer-readable form, and the initials "AC" indicate persons who were designated as the astronomer-in-charge of the transit circle during some part of the program. "GL" identifies the group leaders.

Table 1.
Transit Circle Observers at El Leoncito

<u>Observer</u>	<u>No.</u>	<u>Service Dates</u>			<u>Number of Observations</u>	<u>Number of Tours</u>
J.L. Schombert	0	Dec. 1966	to Aug. 1973		499	12
J.A. Hughes	1	Dec. 1966	Dec. 1968	AC	641	19
E.J. Coyne	2	Mar. 1967	Mar. 1969		3739	85
J.C. Camuñas	4	May 1967	Aug. 1973	GL	20853	358
N. Goubat	5	May 1967	Feb. 1971	GL	12245	222
J. Roitman	6	May 1967	Aug. 1969		5669	109
J. G. Sanguin	7	Feb. 1968	Aug. 1973		19624	365
G. Sanchez	8	May 1968	Aug. 1973	GL	25084	410
C.A. Smith	9	Sep. 1968	Sep. 1970	AC	9335	113
T.E. Corbin	10	Jan. 1969	Jan. 1971	AC	9878	123
A.R. Palma	11	Jun. 1969	Aug. 1973		17160	286
H. Mira	12	Jun. 1970	Aug. 1973		9555	169
R.L. Branham	13	Jul. 1970	Jul. 1972	AC	7164	93
J. Zimmerman	14	Nov. 1970	Nov. 1972		4181	79
M. Cesco	15	Jan. 1971	Aug. 1973		9058	147
M.D. Robinson	16	Jun. 1972	Aug. 1973	AC	813	24

Grateful acknowledgment is made to all who have participated in the program and to the many persons not directly connected with the seven-inch transit circle program for the cooperation given at all stages of the work.

Special acknowledgement is due:

- G. M. Clemence, President, Yale-Columbia Southern Observatory, Inc.
- P. Moore, Comptroller, Yale University
- A. Lopez, Director, Felix Aguilar Observatory
- C. Cesco, General Consultant
- J. Victoria, Engineering Consultant
- Z. Kapalczynski, Resident Administrator

Particular appreciation is expressed to A. Simonpietri and M. Kratzer, Scientific Attachés connected with the American Embassy, Buenos Aires and Mrs. Lili Olga Trevisan, agent for the University of Cuyo for their considerable and successful aid in guiding both scientific program materials and personal effects through the intricate customs procedures of both the United States and Argentina.

GENERAL DESCRIPTION OF INSTRUMENT AND BUILDING

Seven-Inch Transit Circle - The seven-inch (f/11) transit circle was described by F.P. Scott (The New Seven-inch Reversible Transit Circle at the U.S. Naval Observatory, Reports made at the meeting of Commission 8 during the 10th General Assembly of the IAU in Moscow, 1958, Academy of Sciences of the U.S.S.R. Press, Leningrad 1959, Trans. of the IAU, Vol. X) and further by J.A. Hughes in the introduction to his Catalog of the Positions of 939 PZT Stars, 1966, submitted to the faculty of Pure Science, Columbia University, in partial fulfillment of the PhD requirements. Also see Publications of the U.S. Naval Observatory, Second Series, Vol. XVI, Part II for a description of the six-inch transit circle which the seven-inch transit circle closely resembles.

Transit Building - The telescope was housed in a split roof building 24 feet by 34 feet (inside dimensions) with louvered roof, walls, and floor that readily permitted circulation of air through the building. Outriders to the east and west permitted the two halves of the roof to be rolled back as much as eight feet in each direction. In practice, observers rarely observed through a meridional opening more than eight feet wide. Roll-down aluminum shades in the walls to the north and south permitted observers to view the north and south marks. The building was of anti-seismic design with brick and mortar filling the spaces between reinforced concrete columns. The wall tops were about 14 feet above grade, and the peak of the roof was about 4 feet above that. The concrete floor was about four feet above grade and was inlaid with wood flooring in a strip 30 feet long, 15 feet wide near the instrumental piers and 5 feet wide near the collimator piers. The brick and mortar piers were sheathed with wood to increase their thermal inertia. The two instrumental and two collimator piers rested on the ends of a poured concrete cross, not in any direct way connected with the foundation, floors, or walls of the transit building.

Micrometer - Double, motor-driven travelling wires were used to visually track stellar motion in right ascension. The wires were made of tungsten and had a diameter of 3 micrometers. The wires were mounted on an aluminum slide engaged by a precision screw. Eight vertical fixed wires and one horizontal wire were present in the field of view and served by differences in their thickness and spacing to distinguish one part of the field from another. Slowly moving circumpolar stars were observed in the same manner as the other stars.

A minimum of four zenith distance settings (bisections) were made on each star. This was done manually by the observer, who adjusted the zenith distance screw until the star image appeared to be centered between the two horizontal wires. The reading of the zenith-distance screw was accomplished remotely by using a servo-motor system that drove a mechanical counter indicating the screw reading. The counter was photographed at the press of a button by the observer. Usually, one bisection was made at the beginning and another at the end of transit and one each immediately before and after field reversal. Field reversal was accomplished with the aid of a "Dove" reversing prism. This bisection pattern maximized the separation of the bisections in the time domain and tended to minimize correlations among the measurements caused by image displacement associated with atmospheric turbulence in the 0.1 to 1.0 Hz frequency range. Less frequently, two bisections were made at the beginning and two at the end of transit, but the practice was discouraged. The circle was photographed after the last bisection had been made.

At least eight right ascension-screw measurements (ticks) were obtained, four or more before meridian transit with prism direct and an equal number (four or more) after meridian transit with the prism in the reversed position. The micrometer was driven in right ascension at very nearly the sidereal rate by a variable-speed generator and motor

system. The observer maintained the centering of the star image between the two wires by momentarily pressing buttons on a handheld control paddle which allowed a small correction signal to be added to or subtracted from the motor drive signal. The travelling wires would then speed up or slow down until the observer was satisfied that the star image was centered between the wires. At that point the observer could press a button on the handheld paddle which opened an electronic gate, allowing a remote reading of the position of the right ascension screw to be triggered by the leading edge of a clock pulse occurring once every four sidereal seconds. The observer had the option to close the gate at any time to allow for better centering of the star image in right ascension before taking more ticks. No observations with fewer than six ticks and two bisections were kept.

Screens - The transit circle was equipped with three screens, two of fixed density and one variable. The two fixed density screens were mounted inside the transit instrument cube and the variable screen was mounted outside the telescope tube about four inches beyond the objective lens. With a suitable combination of screens, an effort was made to reduce all stars to approximately eighth apparent visual magnitude. The amount of screening was recorded on an observing card using A and/or B to indicate use of either or both of the fixed density screens, and a number from 1 to 28 to indicate the position of the variable screen. The success of this effort was verified by T. Corbin in a study of the amount of screening indicated by eight observers from 1 January to 30 June, 1969. Analysis of the screening used on stars that transited within 33° of the zenith showed excellent compliance by the observers with the requirement to screen to eighth magnitude.

The variable screen is of a type designed by F.B. Littell (see *Publications of the U.S. Naval Observatory*, Second Series, Vol. XIII, p. 7) and consists of cells formed by two sets of thin, blackened brass slats intermeshing at right angles to one another forming rectangular parallelepiped openings 0.25 inches on a side, and 0.50 inches long. The slats are 0.008 inches thick and are held by an 8 3/4 inch diameter blackened aluminum ring. The variable screen could be tilted about an east-west axis parallel to diagonals of the parallelepipeds by means of gears and rods terminating in a graduated head at the observer's end of the telescope tube. As the screen was tilted, the apertures in the line of sight decrease continuously in area, but maintain their rhombic form. In its home position, the variable screen causes a loss of light due to diffraction of about 0.25 magnitude. The maximum screening was about three magnitudes. The denser of the two fixed screens was about 3 mag, the other diminished the brightness by about 2.5 mag. The screening material was of the type commonly used in window screens, and blackened with a flat-finish paint to minimize internal reflections.

GENERAL PLAN OF OBSERVING

General - Observations were made every clear night of the week. Two observers were assigned each night, one covering the hours before midnight (the evening tour), the other after midnight (the morning tour). Tours were usually 4 to 6 hours in duration. No daytime observations were made. At sunset, the roof was opened at least half an hour prior to commencing a tour. In the morning, no stars were observed after sunrise, although it was not uncommon for observers to obtain the final set of instrumental constants after sunlight illuminated the peaks and eastern slopes of the Andes mountains to the west, but before the sun rose on the transit circle building. Once or twice a month, when wind speeds rose to 30 knots or more, observing was suspended. This was because gusts of wind at that speed or greater were capable of momentarily moving the telescope by several seconds of arc in zenith distance. There was also concern that a section of the rolled back roof could be unseated from its rail and fall onto the transit circle.

Constants - Instrumental nadir, level, and collimation were measured at the beginning and end of each tour and at 2 to 3 hour intervals within the tour. Three hours between sets of constants was the maximum time allowed. It was not until April 1970 when the mark lenses were received and installed that it was possible to observe north and south marks along with the other constants. The zenith distances of the marks were also measured for study of possible correlation of systematic behavior between stars and marks. Further details concerning the instrumental constants will be found beginning on pages 166, 188, and 191.

Stars - The rules for selection called for at least one clock star from each ten-degree zone of declination from $+30^\circ$ to -30° and at least four azimuth stars, balanced with respect to lower and upper culmination transits for each tour. However, a tour was regarded as acceptable if four clock stars and two azimuth stars had been observed. During the fundamental azimuth period, from mid-April to late-September, all of those azimuth stars which transited 12 hours apart in the early morning up to an hour before sunrise and up to an hour after sunset were observed in addition to the two to four other azimuth stars which would have been scheduled in any case according to the rule mentioned above.

All SRS stars were observed in zones as follows:

<u>ZONE</u>	<u>SRS LIMITS</u>	<u>FK4 LIMITS</u>
1	$+5^\circ$ to -20°	$+10^\circ$ to -25°
2	-20 -32	-15 -35
3	-32 -50	-30 -55
4	-50 -75	-45 -80
5	-75 -75LC	-60 -70LC

As a rule, at least five FK4 stars per tour were required in each zone selected for observation. At the beginning of the program, only one zone was observed per tour. Later, as the list thinned out and long gaps in time appeared between list stars, combinations of zones were observed, except that zones 2 and 3, which overlapped at the zenith, were never observed in the same tour. When adjacent zones were observed in the same tour, an FK4 star observed in the region of overlap was used twice, that is, once in the reduction of each zone to the FK4 system.

Every effort was made to distribute the observed FK4 stars uniformly throughout the tour in both time and declination. Clock stars in zones 1 and 2 were counted as zone FK4 stars, and upper culmination FK4 azimuth stars in zone 5 were also counted as zone FK4 observations.

One night each week was reserved exclusively for observations of FK4 and FK4 Sup stars from declination $+30^\circ$ to -70° LC. Tours observed on those nights were referred to as zone 6 tours. The rule here was to select one to three of each type of star from each 10° zone of declination, in addition to the normal complement of clock and azimuth stars. If the night designated for zone 6 observing was cloudy, then that type of observing was deferred until the next clear night. When each FK4 Sup star had been observed three times on each clamp, it was no longer selected for observation. Therefore zone 6 tours observed late in the program have a very high percentage of FK4 stars and very few FK4 Sup stars.

Minor Planets - The highest priority was given to observing the minor planets. Every effort was made to ensure that no opportunity to observe them was missed. Observations started as soon as the minor planets could be seen through the telescope in the morning twilight hours. Thereafter, they were observed every clear night until they could no longer be seen in the evening twilight. Their appearance to the observer was starlike, they were observed as if they were stars, and in the preliminary reductions, they were treated as stars. Later on, corrections were added for orbital motion in the interval of time between ephemeris meridian transit and instrumental meridian transit.

Moon - Observations of the Moon started 24 February 1972 and continued to the end of the program. An observation consisted of settings made on whichever of the two limbs (north or south and east or west) was fully illuminated at the time of observation. Observations were made for approximately two weeks out of each lunation from first quarter to last quarter. No screens were used. The presence of the variable screen in its home position did not interfere with the observations.

RIGHT ASCENSIONS

Micrometer - Periodic and progressive screw errors were determined in March 1967 and again at the end of the program in September 1973. Neither the periodic nor the progressive screw errors changed significantly during the program. Therefore, in each case the pre- and post-program results were combined to give the indicated results.

The periodic error was represented by a second order Fourier expansion in θ , where θ is the fractional part of the screw reading. A combination of the results of twelve sets of measurements gave the following solution:

$$\Delta_{\text{per.}} = -0.5 \sin \theta - 0.4 \cos \theta + 0.4 \sin 2\theta - 0.4 \cos 2\theta$$

$$\begin{array}{cccc} \pm 0.5 & \pm 0.5 & \pm 0.2 & \pm 0.2 \end{array}$$

(Unit = Milliseconds of time)

where the indicated errors are mean errors.

Progressive errors of the screw indicated by the average of twenty sets in the central part of the field of view are:

at:	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
									(Unit = revolutions)

$$\Delta_{\text{prog.}} = +0.9 \quad +1.8 \quad +0.8 \quad +0.7 \quad -0.2 \quad -1.3 \quad -0.5 \quad -0.1 \quad -0.2$$

$$\begin{array}{cccccccc} \pm 0.6 & \pm 0.8 & \pm 0.9 & \pm 0.9 & \pm 1.1 & \pm 1.1 & \pm 0.9 & \pm 0.7 & \pm 0.2 \end{array}$$

(Unit = Milliseconds of time)

where the indicated errors are mean errors. Neither the periodic nor the progressive errors were regarded as significant and therefore were not applied. The right ascension micrometer screw nominally has 50 threads to the inch. The mean micrometer equivalent from many measurements of clock star observations was 3.5806 ± 0.0002 seconds of time per revolution at the equator in the focal plane of the seven-inch telescope.

Instrumental Constants - The need to reduce observations to the meridian without observations of the marks during the first two years of operation led F.P. Scott to adopt Bessel's n as it appears in Hansen's equation to solve for preliminary right ascensions:

$$\alpha = T + \Delta T + t$$

The mean time of transit, T , was reduced to the meridian by an equation of the form:

$$\sin t = \sin i \sec \delta + b \sec \phi + n (\tan \delta - \tan \phi)$$

where $n = b \sin \phi - a \cos \phi$, t is the angular distance measured positively to the east from the instrumental meridian to the star, a is the instrumental azimuth, b is the instrumental level, ΔT is the clock correction, i is the interval between the mean tick and the collimation axis, and δ and ϕ are declination (equatorial distance for lower culmination) and latitude, respectively.

The final discussions were made using Mayer's equation to represent the reduction from the mean time of transit to the sidereal time of meridian passage:

$$\sin t = a \sin z \sec \delta + b \cos z \sec \delta + \sin i \sec \delta,$$

where a = instrumental azimuth, z = zenith distance = $\phi - \delta$ at upper culmination, and $z = \delta + 180^\circ + \phi$ at lower culmination.

Collimation - The micrometer screw reading in right ascension of the point where the collimation axis intersected the focal plane was determined from measurements on the north and south horizontal collimators. This reading was then combined with the correction for diurnal aberration, $0^s0050 = 0^s0179$, with due regard to the sign: the correction was added to the east clamp readings and subtracted from the west clamp readings. Thereafter, each observation was referred to an interpolated collimation. It was not unusual to find a change of collimation as large as $\pm 0^s020$ in six hours. Linear interpolation with time between collimations adequately represented the change of collimation.

The procedure for measurement involved making six settings (three with the prism in the direct position and three with the prism reversed) on the south collimator. Then the transit circle was turned to the zenith and ports were opened in the transit circle cube so the line of sight from the north to the south collimator was unobstructed. The north collimator micrometer wires were next set five direct and five reverse on the south collimator, the average of north on south taken, and the north collimator set to that average. Then the ports were closed, the transit circle was pointed at the north collimator, and the observer made 12 settings (six direct and six reverse). The transit circle was again directed to the south collimator for six more settings, three direct and three reverse. The north collimator micrometer had a double wire, while the south collimator micrometer had a single wire.

Level - To measure the level, the transit circle was pointed to its nadir, the observer wheeled a ladder into place south of the telescope; moved a basin of mercury below the objective lens; mounted a beam splitter on the eyepiece; adjusted the focus, illumination, and position of the direct and reflected images for convenient observing; and made 12 settings (six direct and six reverse) of the direct wires on the reflected wires. As in the case of other instrumental constants, the level (corrected for collimation) was linearly interpolated to the time of meridian passage for each observation.

The instrumental level rose steadily from a value close to 0^s00 at the beginning of the program to about $+ 0^s75$ by the end of the first 500 days. After about 300 days at that value, the level was readjusted to a value close to $- 0^s20$, where it remained with seasonal variations of $\pm 0^s15$ until the end of the program. This behavior, while not

typical of a well-behaved transit circle, had no deleterious effect on the results, because level values were interpolated between determinations and applied within each tour individually.

Azimuth of the Meridian Marks - Starting in 1970 and each year thereafter, from April to September, the azimuth of the marks was determined fundamentally by combining as many upper and lower culmination (UC/LC or LC/UC) pairs of observations of an azimuth star, observed twelve hours apart, as possible. Only observations such as these were used to form the preliminary instrumental system in right ascension. All other observations, namely those made prior to 12 April 1970, those made in the summer time, and those made on nights when clouds, instrumental, or observer difficulties prevented the observation of the same azimuth stars twelve hours apart, were reduced differentially to this system on a nightly, tour-by-tour, basis.

The fundamentally determined azimuth of the marks, plus the value of the instrumental azimuth with respect to the marks interpolated to the time of transit, was used in the computation for right ascension of all stars in the tours listed in Table 2.

Table 2.

Subset of tours with fundamentally determined azimuth of the marks and giving also the azimuth of the marks finally adopted from the $(O-C)_\alpha$'s of azimuth stars within each tour corrected by the amount $(O-C)_\alpha^{II}$ given in Table 3. N_F refers to the number of UC/LC or LC/UC azimuth star pairs contributing to the fundamental $\langle A \rangle$. N_A is the number of azimuth stars observed in the tour and used to calculate the adopted $\langle A \rangle$.

Tour No.	Fund. $\langle A \rangle$	N_F	Adopted $\langle A \rangle$	N_A	Tour No.	Fund. $\langle A \rangle$	N_F	Adopted $\langle A \rangle$	N_A	Tour No.	Fund. $\langle A \rangle$	N_F	Adopted $\langle A \rangle$	N_A
1153	+0 ^s .1139	1	+0 ^s .0993	4	1747	+0 ^s .1235	3	+0 ^s .1050	7	1955	+0 ^s .1377	3	+0 ^s .1620	8
1154	.1139	1	.1074	5	1748	.1124	2	.1076	6	1956	.1180	3	.1356	12
1157	.1243	1	.1260	4	1749	.0970	2	.1137	10	1957	.1346	3	.1484	8
1158	.1243	1	.1164	6	1750	.0880	1	.0900	5	1958	.1302	2	.1264	7
1161	.0900	1	.1183	4	1753	.1479	1	.1493	5	1959	.1237	2	.1427	8
1162	.0900	1	.0747	5	1754	.1327	3	.1484	8	1960	.1248	1	.1390	4
1163	.1150	1	.1017	5	1755	.1251	2	.0957	8	1963	.1305	2	.1454	8
1164	.1190	2	.1164	5	1756	.1676	1	.1355	6	1964	.1466	4	.1584	7
1165	.1270	2	.1272	5	1757	.1549	2	.1561	6	1965	.1627	2	.1755	9
1166	.1191	2	.1203	7	1758	.1422	1	.1281	7	1966	.1499	2	.1433	6
1170	.1071	1	.0905	6	1759	.1260	2	.1414	6	1967	.1508	3	.1631	9
1172	.1368	1	.1203	5	1760	.1297	4	.1280	5	1968	.1442	2	.1482	6
1173	.1399	2	.1274	5	1761	.1266	2	.1264	7	1969	.1436	3	.1656	8
1174	.1553	2	.0974	4	1762	.1127	1	.1435	5	1970	.1475	2	.1643	7
1175	.1657	2	.1599	5	1763	.1458	1	.1541	8	1983	.1483	1	.1295	9
1176	.1637	1	.1095	6	1764	.1248	3	.1413	6	1984	.1483	1	.1511	8
1180	.1221	1	.1133	6	1765	.1242	4	.0912	7	2298	.1690	1	.1366	9
1181	.1382	2	.1596	6	1766	.1342	2	.1577	7	2299	.1690	1	.1622	8
1182	.1342	3	.1436	7	1768	.1437	2	.1399	7	2309	.1306	1	.1443	9
1183	.1241	2	.1023	6	1769	.1419	4	.1527	7	2310	.1285	2	.1484	8
1188	.1701	1	.1714	5	1770	.1344	4	.1297	6	2311	.1263	1	.1301	10
1189	.1534	3	.1371	7	1771	.1278	3	.1352	7	2315	.1450	1	.1659	8
1190	.1451	2	.1297	5	1772	.1286	2	.1156	5	2316	.1353	2	.1480	7
1202	.1371	2	.1408	5	1773	.1407	3	.1388	7	2317	.1320	2	.1525	6
1203	.1367	5	.1443	6	1774	.1367	4	.1797	7	2318	.1570	2	.1825	9
1204	.1311	6	.1485	7	1775	.1212	3	.0895	6	2319	.1690	2	.1691	7
1205	.1197	6	.1314	6	1776	.1125	2	.1244	6	2320	.1638	2	.1577	8
1206	.1188	6	.1303	6	1777	.1289	3	.1258	7	2321	.1554	2	.1662	6
1207	.1301	6	.1342	7	1778	.1308	5	.1565	9	2322	.1455	1	.1250	6
1208	.1364	3	.1430	3	1779	.1287	3	.1026	7	2326	.1490	1	.1475	8

Table 2. (continued)

Tour No.	Fund. <A>	N _F	Adopted <A>	N _A	Tour No.	Fund. <A>	N _F	Adopted <A>	N _A	Tour No.	Fund. <A>	N _F	Adopted <A>	N _A
1209	.1375	3	.1439	6	1781	.1021	1	.1086	6	2327	.1490	1	.1411	7
1210	.1375	3	.1343	7	1782	.0870	2	.1208	8	2333	.1391	1	.1626	9
1212	.1296	1	.1221	5	1783	.0719	1	.1309	5	2334	.1314	2	.1503	10
1213	.1387	2	.1302	7	1784	.1479	1	.1086	9	2335	.1364	3	.1387	7
1214	.1483	2	.1462	4	1785	.1479	1	.1125	5	2336	.1344	4	.1405	11
1215	.1488	1	.1310	5	1786	.1279	2	.1354	6	2337	.1356	4	.1084	10
1218	.1386	2	.1576	6	1787	.1261	4	.1440	9	2338	.1417	4	.1634	7
1219	.1386	2	.1058	6	1788	.1276	4	.1330	9	2339	.1356	4	.1329	8
1225	.1566	2	.1699	6	1789	.1269	3	.1133	8	2340	.1404	2	.1591	12
1226	.1531	5	.1419	7	1790	.1159	2	.1386	7	2341	.1428	4	.1517	7
1227	.1508	3	.1660	6	1791	.1130	1	.1251	7	2342	.1297	4	.1453	7
1228	.1473	4	.1634	6	1795	.1280	4	.1599	7	2343	.1177	4	.1377	7
1229	.1380	8	.1272	8	1796	.1227	8	.1389	10	2344	.1247	4	.1383	8
1230	.1286	4	.1287	4	1797	.1222	6	.1136	6	2345	.1515	4	.1437	8
1235	.1391	3	.1634	4	1798	.1395	4	.1299	6	2346	.1636	3	.1809	6
1236	.1291	5	.1001	4	1799	.1466	6	.1413	9	2347	.1502	2	.1304	7
1237	.1210	5	.1296	6	1800	.1415	8	.1427	7	2348	.1589	2	.1343	8
1238	.1353	6	.1241	4	1801	.1386	10	.1272	10	2349	.1541	3	.1796	8
1239	.1451	3	.1386	6	1802	.1337	12	.1355	12	2350	.1280	4	.1276	7
1241	.1590	1	.1201	4	1803	.1182	12	.1134	9	2351	.1222	4	.1487	8
1242	.1538	3	.1231	4	1804	.1088	8	.1181	10	2352	.1329	2	.1563	8
1243	.1591	5	.1742	6	1805	.1227	4	.1178	6	2360	.1356	1	.1778	4
1244	.1644	3	.1508	5	1806	.1320	5	.1430	11	2361	.1511	3	.1280	8
1246	.1496	4	.1294	5	1807	.1187	6	.1217	7	2362	.1685	4	.1803	10
1247	.1496	4	.1594	6	1808	.1106	6	.1302	10	2363	.1782	2	.1799	10
1249	.1311	3	.1356	6	1809	.1141	5	.1209	7	2369	.1569	2	.1363	8
1250	.1384	7	.1395	6	1810	.1183	5	.1411	10	2370	.1674	5	.1486	7
1251	.1476	6	.1374	6	1811	.1190	6	.1259	8	2371	.1741	5	.1932	8
1252	.1550	2	.1404	4	1812	.1181	4	.1194	8	2372	.1737	2	.1353	7
1254	.1510	2	.1423	6	1813	.1182	1	.1412	7	2375	.1590	2	.1605	8
1255	.1420	3	.1529	6	1815	.1542	2	.1440	9	2376	.1629	4	.1535	7
1256	.1240	1	.1379	4	1816	.1466	5	.1451	8	2377	.1669	2	.1913	7
1261	.1603	1	.1398	5	1817	.1371	6	.1221	8	2379	.1603	4	.1849	12
1262	.1634	2	.1613	5	1818	.1327	3	.1423	7	2380	.1603	4	.1523	10
1263	.1536	4	.1511	5	1824	.1223	5	.1053	5	2397	.1233	3	.1437	10
1264	.1577	6	.1502	4	1825	.1362	10	.1433	9	2398	.1221	5	.1326	4
1265	.1610	5	.1777	3	1826	.1495	10	.1509	9	2399	.1272	5	.1073	7
1266	.1535	2	.1402	5	1827	.1488	5	.1422	10	2400	.1422	6	.1465	11
1274	.1686	1	.1679	6	1828	.1117	4	.1225	8	2401	.1381	6	.1298	7
1275	.1726	2	.1894	4	1829	.1117	4	.1001	5	2402	.1256	5	.1087	10
1276	.1924	2	.2006	4	1830	.1563	4	.1523	7	2403	.1399	4	.1435	7
1277	.1906	2	.1849	5	1831	.1512	8	.1438	8	2404	.1417	5	.1332	7
1278	.1492	4	.1468	3	1832	.1399	8	.1310	9	2405	.1391	7	.1423	5
1279	.1414	6	.1616	5	1833	.1379	8	.1379	8	2406	.1335	7	.1421	10
1280	.1500	7	.1554	4	1834	.1420	4	.1198	10	2407	.1208	5	.1016	9
1281	.1517	8	.1637	7	1836	.1625	6	.1528	9	2408	.1228	4	.1075	8
1282	.1407	8	.1421	6	1837	.1625	3	.1451	8	2409	.1287	6	.1258	10
1283	.1377	8	.1310	6	1839	.1317	3	.1351	8	2410	.1297	4	.1269	9
1284	.1461	8	.1485	6	1840	.1317	3	.1461	9	2415	.1288	4	.1214	11
1285	.1575	8	.1407	6	1842	.1168	3	.1299	7	2416	.1288	4	.1424	10
1286	.1749	8	.1746	4	1843	.1168	3	.0871	5	2419	.1208	2	.1182	10
1287	.1865	7	.1945	6	1855	.1361	4	.1090	7	2420	.1206	2	.1190	8
1288	.1841	6	.1717	6	1856	.1361	4	.1524	7	2425	.1270	2	.1329	10
1289	.1805	3	.1782	6	1860	.1310	3	.0992	7	2426	.1221	4	.1108	7
1308	.1584	3	.1485	6	1861	.1374	6	.1333	9	2427	.0976	6	.0970	10

Table 2. (continued)

Tour No.	Fund. <A>	N _F	Adopted <A>	N _A	Tour No.	Fund. <A>	N _F	Adopted <A>	N _A	Tour No.	Fund. <A>	N _F	Adopted <A>	N _A
1309	.1636	6	.1669	5	1862	.1439	3	.1350	8	2428	.0878	4	.1085	8
1310	.1763	6	.1619	6	1864	.1193	2	.1182	6	2431	.1262	3	.1409	7
1311	.1795	5	.1873	5	1865	.1190	5	.1384	7	2432	.1262	7	.1235	10
1312	.1732	2	.1309	4	1866	.1256	6	.1273	8	2433	.1397	8	.1334	10
1315	.1887	2	.1659	6	1867	.1368	6	.1541	8	2434	.1504	7	.1555	10
1316	.1887	2	.1939	6	1868	.1413	3	.1263	9	2435	.1405	6	.1419	9
1319	.1813	2	.1741	5	1870	.1011	3	.1057	8	2436	.1400	6	.1422	6
1320	.1821	4	.1582	4	1871	.0985	7	.1058	8	2437	.1431	6	.1479	8
1321	.1713	4	.1768	2	1872	.1037	8	.1389	10	2438	.1600	5	.1260	7
1322	.1618	4	.1421	2	1873	.1195	8	.1181	8	2439	.1893	2	.1756	6
1323	.1675	3	.1856	4	1874	.1344	8	.1399	9	2443	.1397	3	.1484	4
1324	.1667	2	.1719	5	1875	.1274	8	.1413	7	2444	.1462	6	.1677	8
1325	.1589	1	.1711	7	1876	.1285	8	.1126	10	2445	.1527	3	.1667	5
1328	.1576	1	.1919	4	1877	.1448	8	.1617	8	2446	.1427	1	.1636	7
1329	.1513	3	.1547	4	1878	.1405	7	.1320	8	2447	.1339	4	.1546	10
1330	.1607	4	.1406	3	1879	.1321	3	.1496	7	2448	.1344	5	.1460	9
1331	.1733	2	.1843	5	1884	.1417	3	.1349	10	2449	.1401	4	.1569	7
1336	.1319	2	.1484	6	1885	.1384	6	.1413	8	2450	.1476	4	.1453	8
1337	.1260	4	.1498	6	1886	.1315	6	.1300	8	2451	.1555	6	.1287	8
1338	.1277	4	.1571	5	1887	.1209	6	.1400	8	2452	.1522	6	.1504	7
1339	.1324	2	.1291	7	1888	.1150	6	.1112	8	2453	.1456	3	.1367	10
1341	.1701	1	.1476	5	1889	.1160	3	.1345	8	2455	.1388	2	.1669	5
1342	.1653	2	.1668	6	1895	.1284	2	.1482	8	2456	.1515	3	.1376	8
1343	.1505	2	.1502	9	1896	.1284	2	.1323	8	2457	.1808	2	.1775	7
1344	.1405	1	.1609	6	1898	.1151	1	.1132	3	2458	.1845	1	.1909	7
1349	.1535	1	.1623	4	1899	.1151	1	.1310	7	2459	.1853	1	.1509	5
1350	.1697	2	.1642	5	1901	.1190	2	.1482	7	2460	.1813	2	.1885	8
1351	.1858	1	.1814	6	1902	.1190	2	.1216	7	2461	.1773	1	.1323	6
1352	.1180	1	.1464	6	1903	.1303	1	.1397	5	2477	.1152	1	.1324	7
1353	.1358	2	.1356	5	1904	.1303	1	.1415	6	2478	.1152	1	.1646	8
1354	.1626	2	.1436	5	1906	.1441	1	.1246	5	2487	.1254	1	.1223	10
1355	.1695	1	.1856	5	1907	.1457	2	.1628	7	2488	.1254	1	.1790	8
1356	.1483	1	.1841	6	1908	.1247	2	.1710	4	2725	.2074	1	.2193	4
1357	.1544	3	.1540	5	1909	.1021	1	.1318	5	2726	.2126	2	.2435	8
1358	.1678	4	.1425	5	1914	.1125	1	.1225	8	2727	.2170	2	.2376	4
1359	.1917	4	.1709	6	1915	.1167	2	.1210	8	2728	.2056	2	.2181	10
1360	.2053	2	.1945	3	1916	.1209	1	.1322	8	2729	.1949	1	.2101	6
1365	.2007	1	.2285	4	1918	.1547	3	.1328	9	2731	.2204	1	.2152	4
1366	.2007	1	.1198	8	1919	.1547	3	.1617	10	2732	.2272	2	.2225	10
1368	.1621	2	.1501	4	1921	.1508	1	.1557	9	2733	.2309	2	.2064	5
1369	.1593	4	.1579	7	1922	.1508	1	.1222	7	2734	.2292	2	.2448	9
1370	.1662	4	.1565	6	1923	.1365	3	.1394	6	2735	.2310	2	.2410	5
1371	.1767	4	.1859	10	1924	.1351	6	.1364	5	2736	.2112	2	.2068	7
1373	.1706	3	.1707	7	1925	.1337	3	.1254	9	2737	.1910	1	.1915	4
1374	.1567	1	.1621	7	1927	.1271	2	.1302	7	2739	.2148	2	.2154	4
1380	.1682	1	.1741	6	1928	.1244	4	.1546	8	2740	.2115	3	.2312	11
1381	.1560	3	.1663	6	1929	.1217	2	.1233	8	2741	.2049	1	.2310	4
1382	.1563	4	.1529	6	1931	.1611	2	.1658	7	2749	.2350	2	.2502	3
1383	.1626	2	.1729	6	1932	.1480	4	.1320	8	2750	.2350	2	.2345	8
1386	.1493	1	.1703	6	1933	.1319	4	.1438	10	2755	.2407	1	.2288	8
1387	.1568	2	.1463	6	1934	.1337	4	.1394	6	2756	.2407	1	.2315	4
1388	.1643	1	.1515	6	1935	.1409	4	.1320	8	2761	.2351	1	.2398	3
1391	.1690	2	.1381	7	1936	.1433	2	.1493	7	2762	.2213	2	.2365	12
1392	.1673	3	.1762	7	1939	.1413	2	.1496	7	2763	.2075	1	.2233	3
1393	.1603	2	.1488	8	1940	.1401	3	.1439	9	2765	.2415	1	.2531	4

Table 2. (continued)

Tour No.	Fund. <A>	N _F	Adopted <A>	N _A	Tour No.	Fund. <A>	N _F	Adopted <A>	N _A	Tour No.	Fund. <A>	N _F	Adopted <A>	N _A
1394	.1668	2	.1714	6	1941	.1598	2	.0972	6	2766	.2415	1	.2242	8
1395	.1717	4	.1683	9	1942	.1871	2	.1493	8	2775	.2244	4	.2419	7
1396	.1715	2	.1548	6	1943	.1578	3	.1485	7	2776	.2244	4	.1992	5
1727	.1157	1	.1190	7	1944	.1339	4	.1296	8	2778	.2305	4	.2126	5
1728	.1157	1	.1035	6	1945	.1356	4	.1490	10	2779	.2305	4	.2469	5
1732	.1308	1	.1457	8	1946	.1362	4	.1347	9	2785	.2375	1	.2491	5
1733	.1239	2	.1265	6	1947	.1423	3	.1222	8	2786	.2279	2	.1891	3
1734	.1098	2	.1095	7	1948	.1830	2	.1796	7	2787	.2183	1	.2238	6
1735	.1067	2	.1008	7	1949	.1957	1	.1572	8	2791	.2184	3	.2120	9
1736	.1068	2	.1377	8	1950	.1424	2	.1401	8	2792	.2261	6	.2243	3
1737	.1029	1	.1180	7	1951	.1461	4	.1536	6	2793	.2339	3	.2519	7
1744	.0956	1	.1137	7	1952	.1589	4	.1365	7	2795	.2110	4	.2244	10
1745	.1089	3	.1011	9	1953	.1681	2	.1614	8	2796	.2110	4	.2158	5
1746	.1207	4	.1395	7	1954	.1625	2	.1660	5					

Fundamental Azimuth of the Instrument - The data base for this discussion consisted solely of UC/LC or LC/UC pairs of observations of azimuth stars with exactly 12 sidereal hours between observations of a pair. No observations made before the marks were installed contributed to this study. The fundamental azimuth of the instrument was calculated from the equation:

$$\Delta a = \frac{(C - O)_{\alpha_1} - (C - O)_{\alpha_2}}{\sin z_1 \sec \delta_1 - \sin z_2 \sec \delta_2}, \text{ where}$$

Δa is the fundamentally derived correction to a_{t_1} , a provisional value of the instrumental azimuth referred to an arbitrary time, t_1 , within a particular tour.

$$(C - O)_{\alpha_j} = [\alpha_{\text{apparent}} - (T + a_t \sin z \sec \delta + b_t \cos z \sec \delta + \sin i \sec \delta)]_j,$$

where $j = 1$ refers to the first of an LC/UC or UC/LC pair of azimuth star observations separated by 12 sidereal hours and $j = 2$ is the second azimuth star of the pair; $a_t = a_{t_1} + \Delta a_t$ is the preliminary instrumental azimuth interpolated to t , the time of observation; Δa_t is the time dependent part of the azimuth variation, and should not be confused with Δa used earlier.

The other quantities are:

b_t - instrumental level interpolated to t , the time of observation,

z_j - observed zenith distance of the azimuth star,

δ_j - declination of an upper culmination observation, or
equatorial distance of a lower culmination observation.

Note that the clock correction, ΔT , has been omitted from this computation. By not applying a clock correction at this stage, we are assured that no systematic errors of the preliminary clock star FK4 right ascensions can be propagated into the system of fundamental azimuths.

The clock rate was reliably held to less than $\pm 0^s0005$ in 24 hours by daily monitoring of the difference between the sidereal frequency of the observing clock and a local mean

time frequency standard kept in agreement with the standard mean time frequency available from VLF radio transmissions (see the article by J. Hughes in Boletín No. 14 of the Asociación Argentina de Astronomía, Cordoba 1968, p. 83).

From the equation $A = a_{t_1} + \Delta a - k_{t_1}$, where

A = the azimuth of the line joining the north and south marks,

$a_{t_1} + \Delta a$ = the fundamentally determined azimuth of the instrument from an azimuth star pair, and

k_{t_1} = the azimuth of the instrument measured with respect to the marks at time t_1 , including a linear rate of change with time.

A number of values of A equal to the number of fundamental azimuth star pairs observed during a 24-hour period were combined to give an average value of A , $\langle A \rangle$, which was treated as a constant for each contributing tour.

To illustrate, for the sake of clarity, how the upper and lower culmination azimuth star pairs contributed to the fundamental azimuth, the sequence of tours 1287, 1288, and 1289 may be discussed. Tour 1288 was an evening (Eve) tour. Tour 1287 was a morning (Mrn) tour observed one night earlier than tour 1288, while tour 1289 was a morning tour observed the same night as tour 1288. The azimuth stars observed at either upper or lower culmination in tour 1288 were also observed at the other culmination twelve sidereal hours earlier in tour 1287, and twelve sidereal hours later in tour 1289. Therefore for tour 1288, there were six estimates of A , the fundamental azimuth of the marks, three from the tour before, and three from the tour following:

<u>Tour pairs</u>	<u>Star pairs</u>	<u>A</u>
1287 (Mrn)/1288 (Eve)	70919 (LC)/60919 (UC)	+0.1869
1287 (Mrn)/1288 (Eve)	63973 (UC)/73973 (LC)	+0.1922
1287 (Mrn)/1288 (Eve)	71665 (LC)/61665 (UC)	+0.1841
1288 (Eve)/1289 (Mrn)	60919 (UC)/70919 (LC)	+0.1999
1288 (Eve)/1289 (Mrn)	73973 (LC)/63973 (UC)	+0.1574
1288 (Eve)/1289 (Mrn)	61665 (UC)/71665 (LC)	+0.1840

The value of A , $\langle A \rangle$, given in Table 2 for tour 1288 is the mean of the six values of A given above. The mean error of $\langle A \rangle$, ± 0.00059 , is typical of the mean error of $\langle A \rangle$ for all tours given in Table 2. In the case of tour 1289, there were no observations of fundamental azimuth stars made the following night that could be paired with observations made in tour 1289, so the only values contributing to $\langle A \rangle$ for tour 1289 are the last three listed above, from which the value given in Table 2 for tour 1289 was obtained. As many as twelve pairs contributed to $\langle A \rangle$ in some tours. More typically, three to five pairs contributed to a determination of $\langle A \rangle$. For the 461 tours in the fundamental subset, $\langle A \rangle$, the fundamentally determined value of the azimuth of the marks, and N_F , the number of UC/LC or LC/UC pairs contributing to $\langle A \rangle$, are given in Table 2.

Examination of the slow change of azimuth caused by polar motion showed that it was never large enough in a 24-hour period to require the application of corrections.

A new solution for azimuth star $(C - O)_\alpha$'s was made involving only those tours for which a value of $\langle A \rangle$, the fundamentally determined azimuth of the marks, was available:

$$(C - O)_\alpha = \alpha_{\text{apparent}} - (T + \langle \Delta T \rangle + [(\langle A \rangle + k_t) \sin z + b_t \cos z + \sin i] \times \sec \delta).$$

The clock correction, $\langle \Delta T \rangle$, which was used to compute $(C - O)_\alpha$ for the azimuth stars, was strictly the average $(C - O)_\alpha$ of the clock stars evaluated from the above equation with $\langle \Delta T \rangle$ set equal to zero. Resulting $(C - O)_\alpha$'s of all azimuth stars observed in the fundamental subset of tours were collected and averaged regardless of whether or not they had contributed to $\langle A \rangle$ without regard to clamp, and with equal weight given to upper and lower culmination observations.

The distribution of observations by clamp and culmination was as follows:

		<u>Clamp</u>	
<u>Culmination</u>		<u>East</u>	<u>West</u>
	<u>Upper</u>	694	901
	<u>Lower</u>	684	887

The difference between the numbers of east and west clamp observations did not introduce clamp differences exceeding 0.0004 seconds of time, so there was no need to consider clamp differences and systematic culmination differences at this stage.

The results labeled $(O - C)_\alpha^I$, the average $(O - C)_\alpha$ of all observations for each azimuth star included in the fundamental subset of tours, are given in Table 3. N^I is the total number of observations including both culminations and clamps.

Table 3.
Azimuth Stars - Average $(O - C)_\alpha$

FK4 or FK4 Sup.		<u>Dec.</u>	$(O - C)_\alpha^I$		N^I	$(O - C)_\alpha^{II}$		N^{II}	$(O - C)_\alpha^{UC}$		N^{UC}	$(O - C)_\alpha^{LC}$		N^{LC}
<u>No.</u>	<u>R.A.</u>		$(O - C)_\alpha^I$	N^I		$(O - C)_\alpha^{II}$	N^{II}		$(O - C)_\alpha^{UC}$	N^{UC}		$(O - C)_\alpha^{LC}$	N^{LC}	
264	06 ^h 44 ^m	-80°46'	-0°045	56	-0°052	319	-0°063	171	-0°037	148				
839	22 15	-80 41	- 38	109	- 43	418	- 49	179	- 38	239				
917	05 04	-82 32	+ 40	84	+ 39	364	+ 39	186	+ 45	178				
918	09 04	-85 28	-662	119	-655	425	-674	243	-630	182				
919	12 50	-84 51	-268	111	-285	429	-293	230	-287	199				
920	15 01	-87 57	-526	124	-496	550	-477	264	-512	286				
921	16 42	-86 17	-160	78	-183	344	-165	168	-200	176				
924	22 41	-81 39	- 32	104	- 46	333	- 34	160	- 61	173				
925	23 21	-87 45	-415	123	-421	407	-456	189	-379	218				
1424	16 13	-78 34	-125	89	-129	374	-135	171	-121	203				
1455	17 22	-80 49	- 84	60	- 54	344	- 54	139	- 45	205				
1655	00 12	-88 38	-327	98	-419	379	-434	167	-411	212				
1656	02 28	-85 57	-202	118	-198	501	-197	261	-194	240				
1658	04 29	-83 01	- 48	83	- 81	377	- 64	195	- 61	182				
1659	05 40	-84 49	-156	56	-198	298	-193	173	-214	125				
1660	05 53	-85 56	-459	52	-441	262	-438	147	-433	115				
1661	07 05	-86 57	-512	67	-556	345	-556	203	-559	142				
1663	10 34	-85 50	-178	90	-231	302	-275	167	-204	135				
1664	11 00	-84 20	-251	115	-251	418	-270	229	-233	189				
1665	13 32	-85 32	-487	115	-508	514	-500	257	-525	257				
1666	15 31	-84 18	-206	89	-229	335	-230	181	-233	154				
1667	19 47	-81 29	- 31	89	- 36	395	- 43	159	- 28	236				
1668	20 31	-84 35	-124	141	-207	519	-187	237	-226	282				
2261	03 38	-78 29	+182	76	+194	293	+204	155	+182	138				
2642	08 10	-78 33	- 40	103	- 25	400	- 14	257	- 49	143				

Table 3. (continued)

FK4 or FK4 Sup.	No.	R.A.	Dec.	(O-C) $^I_\alpha$	N I	(O-C) $^{II}_\alpha$	N II	(O-C) $^{UC}_\alpha$	N UC	(O-C) $^{LC}_\alpha$	N LC
	2753	09 ^h 26 ^m	-80°34'	-0 ^s .048	91	-0 ^s .069	381	-0 ^s .070	250	-0 ^s .082	131
	2791	09 52	-79 50	+206	122	+181	408	+185	212	+163	196
	3973	01 05	-83 51	-284	93	-281	322	-287	159	-269	163
	3974	02 02	-82 45	-940	89	-943	387	-936	202	-947	185
	3984	12 25	-83 32	-132	117	-140	383	-131	208	-158	175
	3991	18 14	-84 25	+210	95	+196	416	+191	203	+230	213
	3993	19 25	-81 52	+134	113	+119	469	+118	205	+117	264
	3997	23 49	-82 18	-119	97	-121	376	-126	172	-117	204

Variation of the Azimuth of the Marks - No significant variations of the azimuth of the marks during a 24-hour period during the fundamental azimuth period were ever detected. The most stringent test involved the calculation of the fundamental azimuth of the marks from a combination of morning twilight observations of azimuth stars with evening twilight observations of the same stars on the same day (Mrn/Eve pairs) and the comparison of those values with determinations from a combination of evening twilight observations with morning twilight observations made the same night (Eve/Mrn pairs). From this we conclude that (1) apparent changes in the positions of the marks were caused by motion of the instrument in azimuth, (2) the assumption that the marks were essentially motionless during a 24-hour period was a good one, and (3) that Mrn/Eve and Eve/Mrn pairs of observations could contribute with equal weight to the evaluation of the fundamental azimuth of the marks. The mean azimuth of both marks did change from one fundamental azimuth period to another by small amounts not correlated with changes due to the polar motion. See Table 4, where the mean azimuth of the marks is given for each mark for each of the fundamental periods. N is the number of Eve/Mrn or Mrn/Eve azimuth star pairs contributing to the mean azimuth of the marks.

Table 4.

Fundamental Azimuth of the Marks			
Mean Azimuth of the Marks			
Fundamental Period	South Mark	North Mark	N
18 April - 7 Sep 1970	+ 0 ^s .161 ± 0 ^s .003	+ 0 ^s .143 ± 0 ^s .003	99
14 April - 16 Sep 1971	+ 0.152 ± 0.002	+ 0.112 ± 0.002	148
12 April - 24 Sep 1972	+ 0.162 ± 0.002	+ 0.121 ± 0.002	78
11 April - 21 Jun 1973	+ 0.171 ± 0.004	+ 0.267 ± 0.004	24

The average mean error of a single measurement is $\pm 0^s.024$. No reason is known for the substantial increase of the mean north mark azimuth in the last fundamental period. This change occurred suddenly in one day between the nights of 30/31 January and 31 January/1 February 1973. It is most likely that the north mark lens cell was bumped. It is less likely that the pinhole mounting or the mark house moved due to seismic activity. In any case, since the change occurred in such a way as not to violate the necessary condition that no significant change should take place during a full 24-hour period of fundamental observing, no harm was done to the observing program.

Azimuth of the Instrument - With the fundamentally derived average $(O - C)_\alpha^I$ values of the azimuth stars, we had now for the first time the possibility of making a calculation of the instrumental azimuth on a uniform basis independent of the FK4 system (except for the clock correction) for every tour in the program, including those observed before

the mark lenses were installed. But there was still the problem of how to estimate the time rate of change of the instrumental azimuth during the approximately two-year period when there were no mark lenses.

From the beginning of the program on 4 October 1967 until 12 April 1970, the time rate of change of the instrumental azimuth was determined solely from observations of the collimators. After the marks and mark lenses had been installed, and thereafter until the end of the program on 21 June 1973, the instrumental rate in azimuth was determined from a mean of north and south mark measurements.

The use of observations of the collimators to ascertain the time rate of change of the instrumental azimuth during the early part of the program before mark lenses were installed represented a considerable departure from the usual conduct of a fundamental program. However, confidence in doing so was based on the high level of correlation discovered between the azimuth rate from collimator observations and the azimuth rate from mark observations obtained after the mark lenses were installed. The coefficient of linear correlation for 2665 rate pairs was + 0.93.

The apparent right ascensions of the azimuth stars, calculated from the FK4 mean positions and proper motions, were corrected by applying the fundamentally derived average of the $(O - C)_\alpha^I$ values from an earlier stage. Then a new iterated solution for the clock corrections, ΔT , and the instrumental azimuth, a_{t_1} , was made from the clock and azimuth stars in each individual tour, whether fundamental or not and whether observed with marks or not. The iterative method used was to form first the average $(C - O)_\alpha$ of the clock stars, $\langle \Delta T \rangle_1$, assuming a value of the instrumental azimuth, $\langle a_{t_1} \rangle$, known to be incorrect, but nevertheless close to the actual value. Then $\langle \Delta T \rangle_1$ was used with the $(C - O)_\alpha$ values of the azimuth stars to compute a correction, $\Delta_1 \langle a_{t_1} \rangle$ to the initially assumed azimuth $\langle a_{t_1} \rangle_1$,

$$\Delta_1 \langle a_{t_1} \rangle = \frac{1}{N} \sum_{i=1}^N [(O - C)_\alpha - \langle \Delta T \rangle_1]_i \times \cos \delta_i / \sin z_i,$$

where N = the total number of azimuth stars observed in the tour at either culmination. With a corrected azimuth, $\langle a_{t_1} \rangle_2 = \langle a_{t_1} \rangle_1 + \Delta_1 \langle a_{t_1} \rangle$, a correction to the clock correction, $\Delta_1 \langle \Delta T \rangle$, was calculated and so on, iteratively, until the corrections became small. In fact, in all cases four iterations for the clock correction alternated with three iterations for the instrumental azimuth were sufficient to bring the error in each to less than $\pm 0^s0005$. This approach was equivalent to a least squares solution of Mayer's equation for a tour clock correction and azimuth, subject to the two conditions that $\Sigma(C - O)_\alpha = 0$ for the clock stars, and that $\Sigma(C - O)_\alpha \cos \delta / \sin z = 0$ for the azimuth stars including both culminations. These two conditions on the clock and azimuth star $(C - O)_\alpha$ values were important because they prevented the azimuth star contribution from shifting the clock correction away from that defined by the clock star subset of FK4.

At the completion of this step, the dependence of the instrumental azimuth on the FK4 system was greatly reduced. The procedure was repeated using revised average $(O - C)_\alpha$ values, including all azimuth star observations from all tours to further correct the azimuth star apparent places, thereby ensuring a more homogeneous basis for the calculation of the instrumental azimuth from azimuth star observations and further decoupling the

instrumental azimuth from the FK4 system. The revised average $(O - C)_\alpha$ values are labelled $(O - C)_\alpha^{II}$ in Table 3. The values N^{II} are the number of observations. See Table 2 for a comparison of the fundamentally determined azimuth of the marks with the revised value finally adopted for each tour in the fundamental subset based on the application of the corrections $(O - C)_\alpha^{II}$ to the azimuth star apparent places.

It remains now to study right ascension clamp differences, personal equation of the clock corrections, and the behavior of the average clock star $(O - C)_\alpha$ values to arrive at the definitive clock corrections and the revised average azimuth star $(O - C)_\alpha$ values for the final step in the procedure to produce a system of right ascension measurements freed as much as possible from the influence of the FK4 system.

The clamp corrections in right ascension given in Table 5 represent a 1-2-1 smoothing of the raw values from observations of FK4, clock, and azimuth stars. The values were applied as they appear in the table to every observation as a function of the five-degree zone of declination and clamp without further interpolation.

Table 5.
Clamp Corrections in Right Ascension

Zone Center ± 2.5	$1/2(E - W)_\alpha \cos \delta$	Zone Center ± 2.5	$1/2(E - W)_\alpha \cos \delta$
+27.5	-1.4 ms	-42.5	+1.2 ms
+22.5	-1.8	-47.5	+1.6
+17.5	-1.9	-52.5	+2.2
+12.5	-1.1	-57.5	+2.0
+7.5	-0.2	-62.5	+1.0
+2.5	+0.3	-67.5	+0.3
-2.5	+0.6	-72.5	+0.2
-7.5	+1.0	-77.5	+0.3
-12.5	+1.3	-82.5	+0.4
-17.5	+1.1	-87.5	-0.3
-22.5	+0.7	-87.5LC	+0.9
-27.5	+0.3	-82.5LC	+0.5
-32.5	+0.3	-77.5LC	-0.1
-37.5	+0.7	-72.5LC	-0.2

The mean error of a single correction is of the order of 0.3 milliseconds.

Personal Equation of the Clock Correction - In a separate study, restricted to successive tours observed during the same night by two different observers, differences were taken between the two preliminary clock corrections and arrayed to show the mean difference of each observer with respect to every other observer individually and in the mean and also showing the evening tour (before midnight) and morning tour (after midnight) results separately. We did, in fact, find significant personal equation. The results were independent of which half of the night the observer did his work, so the collected results from both halves of the night were combined and are given in Table 6.

Only those values indicated by an "x" were applied in work described later. It should also be noted that legitimate changes in the preliminary clock correction (associated with the changing equation of the equinox) as large as 0^s.009 in 24 hours could be expected, and therefore a correction for the change was included in this study.

Table 6.
Personal Equation of the Clock Corrections
 $\Delta <\Delta T>$

Observer	Individual Observer Minus Mean of all Other Observers				Number of Tour Pairs
0	+	14 ms	±	9 ms	8
1	+	4		10	10
2	+	11		4 x	65
4	-	12		2 x	407
5		0		2 x	225
6	+	4		4 x	93
7	-	4		2 x	430
8	-	3		2 x	472
9	-	7		3 x	140
10	+	6		3 x	167
11	+	17		2 x	352
12	+	4		3 x	239
13	-	8		4 x	134
14	+	11		4 x	91
15	-	1		3	197
16	-	9		11	16

The presence of significant personal equation in the clock corrections was not expected. The motor-driven, "impersonal" micrometer combined with screens and reversing prism was presumed to have eliminated the effects of personal equation from modern transit circle observations. To the extent that all observations by a particular observer within a given tour are affected to the same degree, application of that observer's clock correction to the observations in his own tour will result in the effective removal of the personal equation. Therefore, for a differential program of observations, the presence of such a systematic effect presents little or no problem to the catalog compiler. However, in our case, desiring to produce a fundamental result independent of errors of the form $\Delta\alpha_\alpha$ in the FK4 system, the presence of personal equation in the clock corrections introduced a complication described in the next section.

Definitive Clock Corrections - A list of 233 stars uniformly distributed in time and in declination between $+30^\circ$ and -30° was selected from the FK4 catalog for use as clock stars. Of these, 109 stars came from the "Auwers" subset (stars numbered less than 1000 in the FK4 catalog) and 124 from the "Zusatzsterne" (stars numbered greater than 1000 in the FK4 catalog). No attempt was made to select clock stars in common with any other clock star list. The clock stars are listed in Table 7.

The approach to the problem of determining the definitive clock corrections was guided by the following considerations:

- (1) The sum of the corrections to the originally assumed FK4 right ascensions of the clock stars must be zero to assure that the zero point of the WL50 catalog right ascension system would be as close as possible to that of the FK4 system. This condition was imposed in anticipation of the discussion that would be made of the minor planet observations to determine a correction to the zero point of the FK4 system in right ascension.
- (2) No assumption would be made as to the functional form of corrections (if any) required of the initially assumed clock star right ascensions. We did not wish to bias the solution by unnecessarily adopting some model

for the behavior of the individual corrections which would later turn out to be inadequate or unsuitable.

- (3) The system of the clock star right ascensions would be defined in terms of that subset of observations obtained when two tours were observed, one before and the other after midnight, in the same night. By combining clock star observations from two tours observed in the same night, the time base-line over which observations are directly related was more than doubled, thus decreasing the influence of FK4 system errors on the computation of the clock correction. The shorter the time base-line over which a clock correction is computed, the more difficult it becomes to decouple the instrumental right ascension system from small amplitude, long period systematic errors in the right ascension system of the initially assumed clock star positions. For the purposes of this discussion only, where a single clock correction for the night was calculated from two tours observed by two different observers, a correction for observer bias in the clock correction was applied, as given in Table 6.

All clock star $(C - O)_\alpha$ values calculated as described earlier from values of the instrumental azimuth derived from the azimuth star $(O - C)_\alpha$ values, in which their apparent places were corrected by the amount $(O - C)_\alpha^{I_1}$ given in Table 3, and the preliminary clock corrections were combined to form for each clock star a preliminary average $(C - O)_\alpha$ designated $(C - O)_\alpha^I$ in Table 7. Based on a subset of 497 pairs of tours observed in the same night, and including corrections for: (1) personal equation of the observer (Table 6), (2) change in the equation of the equinox, and (3) the originally assumed FK4 clock star apparent places by the amount $(C - O)_\alpha^I$, (Table 7), revised clock corrections were calculated on a nightly, rather than a tour-by-tour, basis.

On this new basis, and still working with the 497 pair subset, new clock star residual differences $(O' - O)_\alpha^I$ were calculated, collected by star number, and averaged. The results of this iteration were used to modify again the previously revised apparent right ascensions of the clock stars. With each iteration, the magnitude of the correction to the earlier result continued to approach zero. By the third iteration, no correction exceeded ± 0.001 and the procedure was stopped. Then the average $(O - C)_\alpha$ values from the first approximation and their corrections from the three succeeding iterations were added together for each clock star. The negative of the summed result, which is designated $(C - O)_\alpha^{II}$, is given in Table 7. Finally, for each individual tour, a definitive clock correction was determined using the clock star apparent places corrected by the amount $(C - O)_\alpha^{II}$ (Table 7) and applied to every object observed in the tour.

It was useful to monitor the behavior of each iteration by fitting a second order Fourier series to the successive residual differences. The results were:

1. The first approximation:

$$\langle (C - O)_\alpha^I \rangle = +0.1 - 0.8 \sin \alpha + 0.3 \cos \alpha - 1.1 \sin 2\alpha + 1.5 \cos 2\alpha$$
 (The unit of the coefficients is milliseconds)
2. The difference between the first and second approximations:

$$\langle (O - O')_\alpha^I \rangle = +0.1 - 2.1 \sin \alpha - 0.9 \cos \alpha + 0.0 \sin 2\alpha + 0.4 \cos 2\alpha$$
3. The difference between the second and third approximations:

$$\langle (O' - O'')_\alpha^I \rangle = 0.0 - 0.9 \sin \alpha - 0.5 \cos \alpha - 0.1 \sin 2\alpha + 0.1 \cos 2\alpha$$

4. The difference between the third and fourth approximations:

$$\langle (O'' - O''')_{\alpha}^I \rangle = 0.0 - 0.3 \sin \alpha - 0.2 \cos \alpha - 0.0 \sin 2\alpha + 0.1 \cos 2\alpha$$

5. Fit to the fourth (and final) approximation:

$$\langle (C - O''')_{\alpha}^I \rangle = \langle (C - O)_{\alpha}^{II} \rangle = +0.3 - 3.9 \sin \alpha - 1.0 \cos \alpha - 1.5 \sin 2\alpha + 2.1 \cos 2\alpha$$

The decreasing magnitude of the coefficients of succeeding iterations is clearly evident. The constant, + 0^s0003, in line 5 is reassuring evidence of the equivalence of the zero points of the right ascension systems of the FK4 and WL50 catalog clock stars.

The final net rotation of all 19401 clock star observations in right ascension with respect to the FK4 turned out to be $\langle \alpha_{\text{clock}} - \alpha_{\text{FK4}} \rangle = +0^{\text{s}}0001$. For the aggregate of non-clock FK4 observations in the clock star zone (+ 30° to - 30°), the final net rotation in right ascension is $\langle \alpha_{\text{non-clock}} - \alpha_{\text{FK4}} \rangle = +0^{\text{s}}0015$ for 17241 observations. The latter difference, when compared with the difference of the clock star system relative to the FK4 catalog, may be taken as indicative of the order of magnitude of the internal consistency of the WL50 right ascension system relative to the FK4 within 30 degrees of the equator.

The possibility of a repetition of the computation for the mean $(O - C)_{\alpha}$'s of the azimuth stars using the fundamentally determined azimuth and the definitive clock corrections had to be considered. Each tour was examined to assess the influence of the differences between the preliminary and definitive clock corrections on the calculation of the instrumental azimuth from the revised $(O - C)_{\alpha}$'s of the azimuth stars. The effect was quite negligible, never exceeding $\pm 0^{\text{s}}0002$ even though changes in the clock corrections as large as $\pm 0^{\text{s}}005$ occurred; hence, no further revision seemed necessary or desirable, and work on the instrumental system in right ascension was deemed to have been completed.

Table 7.
The Clock Star List

The clock stars are listed giving the FK4 number, and the approximate right ascension and declination (1950.0 equinox). $(C-O)_{\alpha}^I$ is the first iteration mean $(C-O)_{\alpha}$ based on a subset of 497 pairs of tours observed the same night and reduced with a combined clock correction calculated from both tours in the pair, and corrected for personal equation of the observers and change of the equation of the equinoxes. N is the number of observations in the subset, and $(C-O)_{\alpha}^{II}$ is the summed result of three additional iterations as described in the text.

FK4	R.A.	Decl.	$(C-O)_{\alpha}^I$	N	$(C-O)_{\alpha}^{II}$	FK4	R.A.	Decl.	$(C-O)_{\alpha}^I$	N	$(C-O)_{\alpha}^{II}$
5	00 ^h 09 ^s	-28° 05'	-0 ^s 022	47	-0 ^s 023	1022	00 ^h 50 ^m	-01° 25'	-0 ^s 004	18	-0 ^s 003
19	00 36	+29 02	+7	45	+8	1024	00 56	-06 09	-4	42	-3
27	00 45	+24 00	-2	23	-1	1029	01 04	-24 16	-19	26	-19
36	01 00	+07 37	+2	32	+4	1032	01 09	+20 46	+4	31	+5
47	01 22	-08 27	+7	26	+10	1041	01 24	-13 19	-2	45	0
56	01 39	+05 14	+8	45	+11	1043	01 27	-21 53	-1	64	+1
59	01 42	-16 12	-12	57	-11	1046	01 34	+11 53	-2	16	0
64	01 50	+29 20	+7	30	+10	1055	02 02	-29 32	-12	26	-11
80	02 14	-06 39	+7	54	+10	1056	02 08	+19 16	+3	64	+6
83	02 20	-24 03	-11	43	-9	1071	02 30	-15 28	+13	47	+18
94	02 41	+27 30	-1	42	+2	1079	02 49	+14 53	-8	40	-6
107	03 00	+03 54	+8	38	+12	1080	02 54	-03 55	+1	35	+4
121	03 22	+08 51	+1	60	+4	1087	03 05	-13 57	-15	78	-13
135	03 41	-09 56	-2	45	0	1089	03 12	+20 52	-5	14	0
164	04 26	+19 04	-3	19	+3	1099	03 32	-21 48	+13	59	+18

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Table 7. (continued)

FK4	R.A.	Decl.	(C-O) _α ^I	N	(C-O) _α ^{II}	FK4	R.A.	Decl.	(C-O) _α ^I	N	(C-O) _α ^{II}
169	04 ^h 34 ^s	-03° 27'	+0 ^s 004	40	+0 ^s 008	1102	03 ^h 37 ^m	-28° 06'	+0 ^s 006	4	+0 ^s 009
179	04 49	+05 31	+3	21	+8	1104	03 43	+05 54	+13	28	+18
184	05 00	+21 31	-7	21	-1	1106	03 50	+17 11	-7	31	-4
198	05 17	-27 25	-19	44	-17	1111	03 59	-01 41	+15	54	+21
206	05 29	-00 20	+5	49	+11	1116	04 08	+26 21	-9	41	-5
208	05 32	+09 27	-4	42	+2	1118	04 13	+08 46	-4	34	-1
217	05 42	-22 28	-11	46	-7	1119	04 18	-16 33	+13	49	+18
218	05 45	+17 43	-8	33	-3	1127	04 38	-24 35	-14	64	-11
226	05 54	-14 10	+16	46	+23	1131	04 42	-08 36	+18	47	+24
244	06 21	+04 37	+1	54	+6	1136	04 50	+14 10	+3	24	+9
249	06 33	-22 55	+13	59	+20	1141	05 07	+27 58	-10	47	-6
256	06 42	+12 57	-3	26	+2	1144	05 11	-16 16	+23	59	+30
266	06 52	-11 58	+11	51	+16	1155	05 46	-04 06	+18	19	+24
271	07 01	-15 33	+2	37	+6	1163	06 01	+23 16	-10	43	-6
279	07 17	+22 05	-3	29	+1	1168	06 12	+29 31	-7	41	-3
282	07 23	+27 54	-14	11	-12	1170	06 17	-07 48	+8	26	+13
285	07 24	+08 23	0	65	+6	1179	06 47	-02 13	+10	29	+15
289	07 35	-04 00	+15	44	+19	1182	06 59	+24 17	-8	17	-4
293	07 39	-09 26	+6	88	+10	1183	07 00	-27 52	-15	20	-12
305	08 00	+27 56	-11	41	-9	1188	07 11	+16 15	-1	39	+4
311	08 11	-15 38	+15	59	+18	1204	07 47	-24 44	-5	36	-1
328	08 44	+28 57	-11	52	-10	1212	07 58	-18 16	+11	54	+15
332	08 48	-27 31	-11	76	-11	1216	08 15	+04 22	+3	53	+7
350	09 16	+17 55	-17	58	-17	1220	08 21	+18 30	-1	33	+3
366	09 42	-27 32	-11	46	-12	1222	08 26	+14 23	+2	43	+5
370	09 49	-04 01	+12	58	+13	1223	08 35	+05 53	-3	30	0
373	09 53	-18 46	0	35	-1	1235	08 59	-00 17	+3	32	+6
378	09 58	+08 17	-3	48	-2	1236	09 01	-04 58	+10	22	+13
379	10 05	+17 00	-5	54	-5	1240	09 07	-12 09	+11	45	+13
384	10 14	+23 40	-6	16	-6	1244	09 22	+26 24	-8	32	-7
404	10 39	-01 29	+7	52	+7	1247	09 31	-20 54	+17	51	+19
409	10 47	+10 49	+1	34	0	1249	09 36	+04 53	-8	43	-8
421	11 09	-22 33	-8	66	-10	1266	10 18	+02 33	+1	72	+1
427	11 19	+06 18	+8	44	+7	1271	10 27	+28 50	-16	41	-19
437	11 34	-00 33	-6	34	-8	1274	10 34	-11 58	+16	42	+17
444	11 46	+14 51	-5	49	-8	1279	10 44	+19 09	+11	13	+12
450	12 03	+09 01	-11	43	-14	1280	10 44	-25 47	-18	20	-22
453	12 08	-22 21	-3	43	-5	1283	10 57	-18 02	+12	46	+11
473	12 33	+18 39	-3	24	-5	1286	11 03	-10 49	-7	40	-11
475	12 37	-07 43	+1	61	-2	1295	11 23	+27 01	-18	10	-23
492	13 10	+28 08	+3	35	0	1298	11 27	-27 45	-17	46	-21
501	13 32	-00 20	-4	34	-7	1306	11 48	-05 03	-5	22	-8
507	13 45	+17 42	+1	38	-2	1309	11 53	-16 52	+18	62	+17
510	13 47	-17 53	-2	40	-5	1317	12 18	+03 35	-8	58	-11
517	13 59	+27 38	+7	26	+4	1318	12 20	+26 07	-7	35	-6
519	14 04	-28 27	-3	40	-6	1319	12 23	-27 28	-11	34	-15
525	14 13	-05 46	+1	61	-2	1321	12 31	-12 33	+14	30	+13
556	15 01	-25 05	-6	56	-9	1328	12 43	+07 57	+1	47	-1
559	15 09	-19 36	+6	17	+4	1334	12 51	-17 46	-1	13	-5
564	15 14	-09 12	0	34	-3	1336	12 57	-03 33	+5	72	+2
570	15 23	+15 36	-5	51	-8	1339	13 04	+21 25	+18	22	+18
578	15 33	+26 53	-4	17	-7	1344	13 15	+05 44	0	33	-2
583	15 44	+15 35	-14	49	-18	1348	13 24	-12 27	+8	46	+5
585	15 47	-03 17	+12	33	+10	1354	13 39	-23 12	-11	45	-15
593	15 56	+27 01	-11	17	-14	1372	14 17	+13 14	-10	26	-13

Table 7. (continued)

FK4	R.A.	Decl.	(C-O) _a ^I	N	(C-O) _a ^{II}	FK4	R.A.	Decl.	(C-O) _a ^I	N	(C-O) _a ^{II}
605	16 ^h 16 ^s	-04° 34'	+0 ^s 012	18	+0 ^s 011	1375	14 ^h 22 ^m	+06° 03'	+0 ^s 007	34	+0 ^s 006
613	16 23	+14 08	-3	44	-6	1378	14 24	+19 27	+9	13	+6
620	16 33	-28 07	-5	43	-8	1380	14 33	+29 58	-6	35	-9
622	16 34	-10 28	+3	28	0	1383	14 41	+26 44	-9	37	-12
624	16 39	-17 39	+3	60	0	1387	14 48	-15 47	+7	42	+5
668	17 45	+02 43	+10	27	+9	1392	14 55	+21 45	-10	17	-14
680	18 05	+09 33	+3	35	+2	1393	14 55	+00 02	-6	41	-10
682	18 11	-21 04	-6	37	-9	1408	15 28	+08 45	-5	57	-8
687	18 18	-29 51	-25	13	-31	1419	15 58	-16 23	+12	36	+10
690	18 22	+21 45	+6	24	+4	1422	16 07	+06 31	-2	71	-4
709	18 54	+04 08	+11	38	+9	1425	16 14	+23 15	-6	14	-10
712	18 57	+15 00	+6	25	+5	1436	16 45	+02 09	+23	33	+23
727	19 19	-16 03	+5	51	+3	1440	16 50	+24 44	-7	7	-10
736	19 34	-25 00	-10	37	-13	1445	16 58	-04 09	+23	64	+22
744	19 48	-10 54	-3	24	-6	1447	17 04	-26 27	-27	50	-32
749	19 53	+06 17	+7	41	+5	1451	17 09	+07 57	+4	45	+2
756	20 09	-00 58	+3	28	+1	1454	17 18	+18 06	0	38	-2
772	20 37	+09 55	0	12	-3	1460	17 29	+26 09	+6	19	+3
773	20 37	-18 19	-7	38	-10	1461	17 32	-11 13	+20	39	+19
781	20 45	-09 41	-2	38	-5	1463	17 40	-21 40	-11	36	-14
786	20 52	+27 52	+12	18	+12	1467	17 52	-07 44	-6	38	-9
804	21 20	+19 35	+3	39	+2	1469	17 58	+16 45	-4	28	-7
806	21 24	-22 38	-16	10	-19	1480	18 27	-02 31	+4	42	+3
808	21 29	-05 48	0	34	-3	1482	18 32	-08 17	+3	38	+1
812	21 37	-16 53	+4	41	+1	1487	18 43	-27 03	-7	17	-9
826	21 59	+12 53	0	37	-3	1488	18 44	+26 36	+3	24	0
831	22 05	+25 06	+10	16	+9	1532	20 22	-28 50	-16	37	-19
838	22 11	-28 01	-21	31	-24	1537	20 32	+04 44	-7	35	-11
840	22 14	-08 02	+12	14	+12	1549	20 56	+22 08	+5	29	+2
842	22 19	-01 38	+1	38	0	1553	21 04	-00 18	-7	31	-11
849	22 32	-20 58	-12	21	-16	1556	21 10	-27 50	-11	26	-15
857	22 41	+29 58	+7	12	+6	1574	21 45	+02 27	-7	32	-10
866	22 52	-16 05	+5	54	+5	1575	21 48	+29 56	+16	13	+14
871	23 02	+14 56	+3	22	+3	1579	21 54	+21 00	+5	22	+4
880	23 18	+23 28	-3	16	-4	1588	22 27	+08 52	-5	25	-8
884	23 24	+00 59	0	16	-1	1591	22 28	-10 56	0	29	-2
888	23 33	-07 44	+14	44	+15	1596	22 43	+19 06	+12	21	+12
894	23 40	-14 49	+11	30	+12	1606	23 09	+08 27	-2	51	-4
905	00 01	-17 37	-3	36	-2	1611	23 19	-27 16	-12	43	-14
1004	00 12	+19 56	+3	13	+4	1623	23 45	-03 02	+8	44	+9
1008	00 18	+07 55	+2	46	+3	1624	23 47	-21 54	-14	25	-15
1011	00 25	-11 56	+3	16	+4	1625	23 50	+10 46	-19	10	-22
1020	00 46	+16 40	-1	35	+1	1629	23 55	+24 52	-10	21	-11

Influence of the Pivot Errors on Instrumental Level and Azimuth - At the end of the program, from June to August 1973, various instrumental studies were completed. Among them was a study of the pivot errors based on a mercury spot method developed in 1908 and described by C. W. Frederick (*Publications of the U.S. Naval Observatory*, Second Series, Vol. II, Part 1, p. 32). It consists of viewing and measuring with a micrometer and microscope the motion of a small spot of mercury (selected from among many spattered onto a glass reticule, mounted within the hollow of a pivot) as the instrument is rotated about its axis. (See also the *Manual for Transit Circle Observers* by F.P. Scott). The 1973 results compared favorably with earlier results obtained in 1954 and 1962, so an average of the three sets of measurements was taken and the results given in Table 8 were linearly interpolated with zenith distance and applied to the level and azimuth values used in the re-reductions of each individual observation. The values of Δa and Δb given in Table 8 are appropriate for west clamp observations. For east clamp

observations, the sign of the zenith distance was reversed and the corresponding value of Δa was used; in the case of Δb , the sign of Δb had also to be reversed.

Measurements of collimation and level are themselves also affected by pivot errors. A small correction to the collimation of $\Delta c = (\Delta a_{90} - \Delta a_{+90}) / 2 = +0^{\circ}0002$ was added to each west clamp collimation and subtracted from each east clamp collimation. For the level, the correction $(\Delta a_{90} - \Delta a_{+90}) / 2 - \Delta b_{180}$ happened to be strictly zero.

Any error in the measurement of the azimuth of the marks with respect to star observations that comes about because of pivot errors at the north and south mark settings is precisely cancelled by an equal and opposite error in the instrumental azimuth with respect to the marks; this ensures the correct application of instrumental azimuth with respect to the stars in all cases. Therefore, mark measurements were the only observations not corrected for pivot error, for even if the effect of the pivot errors on the determination of instrumental azimuth with respect to the marks had been quite large, the determination of the crucial quantity, the instrumental azimuth from star observations (all of which received a correction for pivot error), is not affected.

Table 8.
Influence of the Pivot Errors on Instrumental Level and Azimuth

<u>Observed Zenith Distance</u>	<u>Azimuth Correction</u>	<u>Level Correction</u>
(Measured Positive to the South)	<u>Δa</u>	<u>Δb</u>
+100	+2.5 ms	-1.0 ms
90	+4.5	-1.2
80	+6.9	0.0
70	+6.8	+0.1
60	+6.8	+1.0
50	+6.1	+1.0
40	+4.7	+0.4
30	+2.1	-0.2
20	+0.2	-0.2
+10	-1.3	0.0
0	-3.8	-0.2
-10	-6.5	+0.1
20	-7.6	-0.2
30	-8.7	-0.1
40	-6.8	+0.1
50	-5.3	+0.3
60	-2.9	+0.8
70	-0.4	+1.0
80	+3.4	+0.7
90	+4.9	+0.2
-100	+7.6	-0.2

Zenith Observations - Within the area of overlap between zones 2 and 3, from -30° to -35° declination, the same 50 FK4 stars observed with the observer's head to the south in zone 2 were observed head north in zone 3. The average difference in the sense $(O - C)_{\alpha}$ head south minus $(O - C)_{\alpha}$ head north is $< 15\Delta\alpha \cos\delta > = +0''.03 \pm 0''.01 (+0^{\circ}0002 \pm 0^{\circ}0001)$. Precisely the same result with somewhat larger mean errors is obtained if the subsets of 34 stars south of the zenith and 16 stars north of the zenith are treated separately, thus confirming the significance of the result. However, since the magnitude of the effect is small, no correction for zenith discontinuity in right ascension was applied.

A comparison of the differences in right ascension of this catalog with respect to the FK4 in the five degree zone north of -30.0 and the one south of -35.0 was inconclusive insofar as an instrumental zenith term is concerned, because of sizeable systematic changes in the FK4 system itself over that short interval of declination.

Mean Errors - Residual differences, $\Delta\alpha$, from the mean were formed for all stars with two or more observations. A standard error, ϵ , was calculated from them according to the equation,

$$\epsilon^2 = \sum_{i=1}^n (15\Delta\alpha_i \cos \delta_i)^2 / (n-1).$$

This estimate was corrected for the bias introduced by small numbers of observations per star to give σ_ϵ , the best estimate of the standard deviation of a single observation of the parent population, according to the development by W.E. Deming and R.T. Birge, Rev. of Modern Physics, vol. 6, pp. 119 - 161, July 1934. They give:

$$\sigma_\epsilon = (\epsilon/T) [(n-1)/n]^{1/2}, \text{ where}$$

$$T = (2\pi/n)^{1/2} / B[(n-1)/2, 1/2] = (2\pi/n)^{1/2} \Gamma(n/2) / (\Gamma[(n-1)/2] \Gamma[1/2]),$$

$$B(m, n) = \int_0^1 x^{(m-1)} (1-x)^{(n-1)} dx \text{ is the Beta function and}$$

$$\Gamma(n) = \int_0^\infty x^{(n-1)} e^{-x} dx \text{ is the complete Gamma function.}$$

With the correction above, the mean error of a single right ascension, as deduced from residual differences from the mean of all stars observed two or more times, can be characterized as a function of zenith distance as follows:

$$ME_{1\alpha}^2 = (0.250)^2 + (0.124)^2 \tan^2 z.$$

See Table 9 for a comparison of results with and without the Deming and Birge corrections for various classes of observations. A comparison of the columns headed ϵ for stars with two, four, and six observations only, with the corresponding columns headed σ_ϵ clearly shows the presence of a bias which decreases as the number of observations per star increases. The bias in the final columns of ϵ and σ_ϵ for FK4 stars with six or more observations is negligible, as one would expect because of the relatively large numbers of observations per star received by the FK4 stars.

Table 8.
Right Ascension Mean Errors

Mean errors, ϵ , of a single observation in right ascension given in 5° zones of zenith distance. Also given is the estimate of the standard deviation, σ_ϵ , obtained when ϵ is corrected for the bias due to small numbers of observations, as described in the text.

Zenith Distance	All stars having two or more observations			Stars having only two or four observations		
	ϵ	σ_ϵ	N	ϵ	σ_ϵ	N
-57.5	± 0.296	± 0.307	135			
-52.5	0.268	0.281	139			
-47.5	0.244	0.258	173			
-42.5	0.236	0.248	173			
-37.5	0.205	0.244	671			
				(Two Observations)		
				± 0.190	± 0.238	478
-32.5	0.197	0.240	1629	0.190	0.238	1352
-27.5	0.200	0.244	1535	0.192	0.241	1279
-22.5	0.201	0.245	1377	0.195	0.245	1143
-17.5	0.196	0.239	1379	0.190	0.238	1150
-12.5	0.208	0.241	1389	0.191	0.240	707
				(Four Observations)		
-12.5	0.208	0.241	1389	± 0.217	± 0.235	424
- 7.5	0.232	0.251	1438	0.226	0.245	1091
- 2.5	0.228	0.248	1455	0.226	0.246	1098
+ 2.5	0.245	0.266	1698	0.242	0.262	1320
+ 7.5	0.250	0.270	1460	0.247	0.269	1107
+12.5	0.246	0.266	1323	0.242	0.263	1018
+17.5	0.250	0.270	1306	0.246	0.267	989
+22.5	0.255	0.275	1130	0.248	0.269	852
+27.5	0.255	0.276	1039	0.251	0.273	784
+32.5	0.263	0.284	855	0.261	0.283	659
+37.5	0.267	0.288	709	0.265	0.287	531
+42.5	0.267	0.287	545	0.259	0.282	399
+47.5	0.272	0.292	386	0.262	0.284	245
+52.5	0.281	0.301	205	0.274	0.297	130
+57.5	0.305	0.325	60	0.317	0.344	38
+62.5	0.310	0.333	155	0.307	0.333	113
+67.5	0.354	0.382	355	0.355	0.386	262
+72.5	0.442	0.476	310	0.437	0.475	209

Table 9. (continued)

Zenith Distance	Stars having only six observations			FK4 stars having six or more observations		
	ϵ	σ_ϵ	N	ϵ	σ_ϵ	N
-57.5	± 0.285	± 0.300	59	± 0.339	± 0.347	26
-52.5	0.261	0.274	56	0.266	0.272	26
-47.5	0.248	0.260	62	0.266	0.271	28
-42.5	0.246	0.258	66	0.239	0.244	37
-37.5	0.245	0.257	48	0.238	0.241	42
-32.5	0.226	0.238	57	0.228	0.230	36
-27.5	0.235	0.247	53	0.239	0.241	43
-22.5	0.206	0.217	31	0.223	0.226	49
-17.5	0.233	0.245	37	0.237	0.239	43
-12.5	0.225	0.236	55	0.238	0.239	39
- 7.5	0.322	0.338	62	0.246	0.248	40
- 2.5	0.243	0.255	48	0.252	0.254	36
+ 2.5	0.239	0.252	73	0.259	0.260	58
+ 7.5	0.247	0.259	73	0.260	0.262	40
+12.5	0.249	0.262	62	0.257	0.258	51
+17.5	0.276	0.290	69	0.268	0.269	36
+22.5	0.264	0.277	57	0.266	0.267	39
+27.5	0.253	0.266	61	0.277	0.279	36
+32.5	0.257	0.270	61	0.278	0.280	29
+37.5	0.265	0.279	50	0.277	0.277	28
+42.5	0.277	0.291	43	0.290	0.291	19
+47.5	0.291	0.306	42	0.299	0.299	15
+52.5	0.268	0.282	15	0.350	0.352	2
+57.5	0.250	0.263	2	0.319	0.322	9
+62.5	0.372	0.391	5	0.277	0.278	3
+67.5	0.299	0.315	32	0.384	0.387	9
+72.5	0.393	0.413	28	0.403	0.407	20

The Combination of Upper and Lower Culmination Observations - The results of observations at upper and lower culmination have been reported separately for the sake of the completeness of the observing record. However, except to study behavior of the instrumental system, no lower culmination observation in this catalog should be used for astrometric purposes if the observation was made at a zenith distance exceeding $+70.0$. This limit corresponds to a declination of -78.2 observed at lower culmination. Beyond this limit, it seems that both coordinates begin to depart systematically from their upper culmination counterparts. There is no such problem for observations made north of the zenith.

When combining observations at upper and lower culmination, it is recommended that they be combined with weights that are directly proportional to the number of observations, and inversely proportional to the square of the mean error of a single observation expressed as a function of zenith distance, as given by the equation in the section on mean errors, i.e.,

$$\langle \alpha \rangle = \frac{\frac{\alpha_{UC} N_{UC}}{ME_{1\alpha}^2(z_{UC})} + \frac{\alpha_{LC} N_{LC}}{ME_{1\alpha}^2(z_{LC})}}{\frac{N_{UC}}{ME_{1\alpha}^2(z_{UC})} + \frac{N_{LC}}{ME_{1\alpha}^2(z_{LC})}}$$

and similarly in declination.

DECLINATIONS

Micrometer Screw - The micrometer screw nominally has 72 threads to the inch. Several sets of measurements of the nadir point, the north and south collimators, and stars, mostly in the declination range from -55° to -70° , gave a mean screw equivalent of 0.0101072 per revolution. These measurements included a thorough mixture of the above, so as to minimize the influence of any particular set of division errors as would always be found at the nadir, for example.

Periodic and progressive errors were determined in March 1967 and again at the end of the program in September 1973. The periodic error as indicated by the average of 16 sets of measurements (with eight sets of determinations from each time period) was:

$$\Delta_{Per.} = +15 \sin \theta + 33 \cos \theta - 7 \sin 2\theta + 3 \cos 2\theta,$$

$$\begin{array}{cccc} \pm 5 & \pm 5 & \pm 3 & \pm 3 \end{array}$$

(unit = 0.001 seconds of arc)

where θ is the the fractional part of the screw reading, and the indicated errors are mean errors.

Progressive errors of the screw indicated by the average of 20 sets of measurements (with 10 sets of determinations from each time period) were:

at:

	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5
	(unit = revolutions of the screw)												
$\Delta_{Prog.} =$	+ 3	+ 5	+ 7	+ 11	+ 10	+ 11	+ 11	+ 9	+ 8	+ 7	+ 4	+ 2	0
	± 1	± 1	± 2	± 2	± 2	± 2	± 2	± 2	± 1	± 1	± 1	± 1	± 0
	(unit = 0.01 seconds of arc)												

About 98% of the bisections in this program were made between 2.0 and 10.0 revolutions.

There is little doubt that the results given above for the periodic and progressive errors of the zenith distance screw indicate the presence of significant error. However, the effects are small enough over the part of the screw actually used for most observations that no corrections were applied.

Micrometer Wires - The separation of the wires used by the observer for making measurements was about seven seconds of arc in both coordinates at the scale of the seven-inch transit circle. The inclination factor of the horizontal wires was determined from a comparison of zenith distance bisections made on a star at the east and west sides of the field of view during transit, but without reversing the prism. The factor was not negligible. Since it is the tangent of the angle between the horizontal threads and the normal to the vertical wires as seen in the focal plane it is dimensionless, and measurements varied between + 0.00182 and + 0.00050. Whenever the micrometer was re-attached to the telescope, it had to be realigned using the intersection point of the horizontal and vertical wires of the north collimator in order to make the right ascension wires as nearly vertical as possible. This was accomplished by rotating the micrometer about the optical axis by very small amounts until settings on the north collimator near the top of the transit circle's field of view agreed within ± 0.003 revolutions with settings made near the bottom of the field of view.

As soon as possible after remounting the micrometer and realigning as to the vertical, the large number of measurements necessary to determine the inclination factor were made. Table 10 contains the values of the inclination factor actually used. The correction, independent of clamp, was always taken in the sense appropriate to reduce the mean bisection, MB, at the average place of bisection, PB, of the right ascension screw to the value it would have had at the collimation point, i.e.,

$$MB_{\text{Corrected}} = MB + (\text{Collimation point} - PB) \times (\text{Inclination Factor}).$$

Table 10.
Table of Inclination Factors

Prior to Leoncito <u>Sidereal Day</u>	The inclination <u>factor was</u>	<u>Calendar</u> <u>Date</u>
6744	+0.00107	26 Jul 1968
6861	82	20 Nov 1968
7016	112	23 Apr 1969
7227	104	20 Nov 1969
7254	123	16 Dec 1969
7260	128	22 Dec 1969
7503	80	22 Aug 1970
7631	70	27 Dec 1970
7708	90	14 Mar 1971
7714	182	20 Mar 1971
7732	60	7 Apr 1971
7769	86	14 May 1971
8040	75	8 Feb 1972
8131	62	9 May 1972
8161	50	8 Jun 1972
8318	53	12 Nov 1972
8542	0.00056	23 Jun 1973

Circle Cameras - The circle was photographed with four cameras placed 90 degrees apart, using Kodak HC417 high contrast 35mm copy film. The film was developed at El Leoncito and then sent to Washington for measurement on one of the automatic measuring machines. The measuring machine screw was calibrated from measurements on special settings in which opposite ends of a circle diameter were brought under each camera. The calibration included a correction for the division errors of the circle graduations. Periodic and progressive errors of the measuring machine screw were monitored. When either one became excessively large due to normal wear, a new screw was machined in the U.S. Naval Observatory instrument shop.

Division Errors - The graduated circle used in this program is the same one that was used during the ACK₃R program about 10 years earlier. There were 7200 graduations engraved on a gold band rolled firmly into a specially shaped circular groove about 28 inches in diameter. The entire wheel including the hub and spokes into which the gold band was inlaid was machined from a single piece of stainless steel stock. Two completely independent sets of division errors were obtained at the end of the program using a version of the Levy method in which the 3600 diameters of the graduated circle were treated as 60 families of 60 diameters each. These two sets of division errors were compared with each other and with an earlier set obtained in 1954. No evidence of any significant systematic change in the division errors during the 19-year interval between measurements could be found, so an unweighted mean of the three measurements for each diameter correction was formed and applied. The average mean error of a diameter correction is 0.06 seconds of arc, as estimated from the agreement among the three measurements for each diameter correction.

The graduated circle was never shifted with respect to the telescope. Since this is unusual in the conduct of a fundamental program, it is a source of some concern that uncompensated circle flexure may be present in our results. A comparison with series of observations of other instruments suggest that if the effect of circle flexure is present in the final instrumental declination system, its influence does not exceed a few hundredths of a second of arc.

Another source of systematic error is connected with the 90° angle maintained between the microscope diameters. This angle is an integral multiple of the 3° angle between members of a Levy division error family, hence any systematic error in the corrections to the family members goes directly into the declination system. This effect was somewhat diminished by measuring the two divisions nearest to the reference line in each microscope, thereby involving two adjacent families. Clamp reversal had the additional ameliorative effect of introducing two additional families into the declination system, with the exception of stars located precisely an integral multiple of 3° from the nadir point, which, because they would use diameters from the same families as the nadir, would have systematic family effects subtracted out. In future programs, care will be exercised to set the microscope diameters at such angles from one another as to break up correlations introduced by division error measurement procedures.

Nadirs - Preliminary zenith distances were calculated from zenith points interpolated linearly with time from nadir point observations made over a mercury basin at the same time that level observations were made. An observation of the nadir consisted of six settings with prism direct and six with prism reversed with a circle camera exposure before the first setting and another after the last setting.

Refraction - The refraction was calculated using the same theoretical basis as the fourth edition of the Pulkovo Refraction Tables as given by Hugo Gylden. See F.P. Scott's Manual for Transit Circle Observers.

R , the refraction, was computed for each observation from the equation:

$$R = (g_s/g_p) \Psi \tan z [(1+mt_0)/(1+mt)]^\lambda [(b/b_0)(1+\beta_1 r)/(1+\beta r)]^A (1+q\pi_0)/(1+q\pi)$$

where:

$$g_s/g_p = 1 - 0.001286 - 0.002634 \cos 2\phi + 0.000006 \cos^2 \phi - 0.0000002h$$

is a gravity correction

ϕ - station latitude

h - height above sea level in meters; the value of g_s/g_p for El Leoncito was taken as 0.99706

$\Psi = \Psi_0(1 - \Delta\mu)$, where $\Psi_0 = 57''.5834$ - Constant of Refraction

$$(1 - \Delta\mu) = 1 - 0.138618c - 0.224518c^2 - 0.236421c^3 - 0.188840c^4 - 0.118622c^5$$

$$\lambda = 1.000427 + 0.171936c + 0.250075c^2 + 0.210882c^3 + 0.110539c^4$$

$$A = 1.000427 + 0.016704c + 0.025601c^2 + 0.023603c^3$$

$$c = \tan^2 (\zeta/2)$$

$$\tan \zeta = 0.182574 \tan z$$

z = observed zenith distance

$m = 0.003670$, the coefficient of expansion of air

$$t_0 = 9.31 \text{ } ^\circ\text{C}$$

t = air temperature in $^\circ\text{C}$

b = air pressure in mm as indicated by the mercury barometer

$$b_0 = 751.51 \text{ mm}$$

$\beta_1 = 0.0000184$, coefficient of expansion of glass

$\beta = 0.0001818$, coefficient of expansion of mercury

τ = temperature of mercury in the barometer in $^\circ\text{C}$

$q = +0.0002084$, factor by which water vapor modifies the index of refraction of dry air

$$\pi_0 = 5.5 \text{ mm}$$

π = partial pressure of water vapor in air

The air temperature was read approximately every twenty minutes from a thermometer mounted at the end of an air duct suspended about ten feet above the floor over the west pier of the transit circle. Air was drawn past the thermometer from inside the transit building and blown outside the transit house through the duct.

The air pressure was read every 45 minutes from a Green mercury barometer mounted on the inside of the east wall of the transit house. A dew point indicator was read at the same time in order to allow for the application of a correction to the barometer reading for the partial pressure of water vapor. See Table 11 for the saturation vapor pressure corresponding to a given dew point temperature. This table was adapted from Tables 95 and 97 of the Smithsonian Meteorological Tables, Smithsonian Institution, 1951. See F.P. Scott's Manual for Transit Circle Observers for details.

Table 11.
Saturation Vapor Pressure (SVP, mm of Hg) as a function of Dew Point (DP, $^\circ\text{F}$)

DP	SVP	DP	SVP	DP	SVP	DP	SVP
-30	0.2	+ 6	1.3	+32	4.6	+68	17.5
-24	0.3	12	1.8	38	5.8	74	21.5
-18	0.4	18	2.4	44	7.3	80	26.2
-12	0.5	24	3.1	50	9.2	86	31.8
- 6	0.7	30	4.2	56	11.5	92	38.4
0	1.0	32	4.6	62	14.2	98	46.2

Reduction to Meridian - A correction, ΔB , was applied to each bisection depending on the place of bisection, P_B , and the equatorial distance, δ_{Eq} , given by the declination, δ , for upper culminations and equal to $-\delta - 180^\circ$ for lower culminations

$$\delta_{Eq} = \delta \quad (\text{UC})$$

$$\delta_{Eq} = -\delta - 180^\circ \quad (\text{LC}).$$

The correction is given by $\Delta B = 0.000192 \times C \times (P_B - P_C)^2 \times \tan \delta_{Eq}$, where P_C is the collimation point in revolutions of the right ascension screw, and $C = \pm 1$, where the upper sign was used for west-clamp observations, and the lower sign was used for east-clamp observations.

Variation of Latitude - A correction for the variation of latitude was applied to the assumed station latitude used to calculate the declinations from the observed zenith distance measurements. The variation of latitude was calculated from definitive values of the polar coordinates (x,y), as published by the Bureau Internationale de l'Heure (B.I.H.) in the system BIH68 and made available to us for each day of the year by the U.S. Naval Observatory Time Service Department. The difference, $d\phi$, was calculated from the equation

$$d\phi = x \cos \lambda - y \sin \lambda, \text{ where}$$

$$d\phi = \phi_{\text{instantaneous}} - \phi_{\text{conventional international origin}}$$

λ - the astronomical longitude measured east from the Greenwich meridian, and x and y are the parameters of polar motion.

The station coordinates were taken as

$$\lambda = 4^h 37^m 19.0^s \text{ W}$$

$$\phi = -31^\circ 48' 09.70'' = -31.802694$$

Values of x and y were not available during the program, but by the time the discussion of the right ascension system had been completed, and the time came to make a definitive discussion of the declination system, the B.I.H. had distributed definitive values. See Table 12 for the corrections, $d\phi$, which were applied to the assumed station latitude.

Table 12.
Adopted Variation of Latitude

The variation of latitude, $\Delta\phi = \phi_{\text{date}} - \phi_{\text{CIO}}$, was added to the assumed station latitude to calculate a declination from the observed zenith distance, given by $\Delta\phi = 0.352999x + 0.935624y$, where x and y are the parameters of polar motion given by the B.I.H. in the system BIH68.

Fraction of year	1967	1968	1969	1970	1971	1972	1973
0.00		-0.25	-0.18	-0.09	-0.00	-0.07	-0.18
0.05		-0.25	-0.22	-0.12	-0.01	-0.03	-0.14
0.10		-0.26	-0.25	-0.18	-0.05	-0.01	-0.10
0.15		-0.25	-0.28	-0.25	-0.09	-0.01	-0.10
0.20		-0.25	-0.31	-0.31	-0.14	-0.05	-0.10
0.25		-0.24	-0.33	-0.33	-0.22	-0.10	-0.11
0.30		-0.24	-0.35	-0.36	-0.28	-0.16	-0.12
0.35		-0.25	-0.36	-0.39	-0.33	-0.21	-0.14
0.40		-0.23	-0.36	-0.42	-0.40	-0.27	-0.17
0.45		-0.21	-0.35	-0.43	-0.45	-0.32	-0.20

Table 12. (continued)

<u>Fraction of year</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
0.50		-0".20	-0".33	-0".42	-0".50	-0".38	-0".23
0.55		-0.19	-0.30	-0.39	-0.50	-0.41	-0.27
0.60		-0.18	-0.24	-0.34	-0.48	-0.43	
0.65		-0.17	-0.18	-0.29	-0.44	-0.44	
0.70		-0.16	-0.14	-0.24	-0.40	-0.42	
0.75	-0".19	-0.15	-0.12	-0.18	-0.34	-0.38	
0.80	-0.19	-0.13	-0.11	-0.13	-0.27	-0.34	
0.85	-0.20	-0.11	-0.10	-0.08	-0.20	-0.31	
0.90	-0.22	-0.11	-0.09	-0.04	-0.15	-0.28	
0.95	-0.23	-0.14	-0.09	-0.01	-0.11	-0.24	

Flexure - The flexure of the instrument was determined by use of the horizontal collimators. The mean value of 1806 measurements of the coefficient of the $\sin z$ term was equal to $+0".335 \pm 0".011$, where z was measured positive to the south. This value was $0".01$ larger than an earlier value adopted for the reduction of the seven-inch transit circle observations made during the AGK3R program about 15 years earlier while the transit circle was in Washington, D.C. The value given above was adopted as definitive partly because of its high weight, partly because of its excellent agreement with the earlier result, and also because of the difficulties we expected to encounter had we tried to make a simultaneous least-squares solution for the definitive corrections to the assumed flexure, refraction, and station latitude in the classical manner. The flexure was applied to the observations according to the equation:

$$z_{\text{new}} = z_{\text{old}} + 0".335 \sin z, \text{ } z \text{ measured positive to the south.}$$

Prism Equation - Several of the observers were found to have a rather large prism equation, that is, if observations of the same star made with the prism in its direct position were compared with observations made with the prism in its reversed position, it was found that certain observers had differences that were large and systematic over long periods of time. Only observations which were balanced as to prism direct and reverse were kept, and no corrections were applied for prism equation.

Zenith Observations - The average difference $(O-C)_{\delta_{\text{head south}}}$ minus $(O-C)_{\delta_{\text{head north}}}$ for the same 50 FK4 stars described in the section on zenith observations in right ascension is $\Delta\delta = +0".005 \pm 0".018$. For the 34 FK4 stars to the south of the zenith,

$$\Delta\delta = +0".008 \pm 0".018;$$

and for the other 16 stars to the north of the zenith,

$$\Delta\delta = -0".004 \pm 0".042.$$

There is no evidence of a significant zenith discontinuity in declination.

Clamp Differences in Declination - The clamp difference in declination, in the sense east minus west, as averaged over all zenith distances from observations of FK4, clock, and azimuth stars is $+0".70$. This difference is unusually and disturbingly large. We were not able to find the cause for it. Residual differences in declination were investigated for an erroneous micrometer equivalent in declination and for an erroneous division error determination for the divisions involved in the nadir observations, but those possibilities were eliminated by the investigation. Clamp corrections in the form

$1/2(E - W)_\delta$ are given in Table 13. They represent a 1-2-1 smoothing of the raw values in five degree zones of declination from observations of FK4, clock, and azimuth stars, and were applied as they appear in that table to every observation without further interpolation as a function of the zone and clamp.

Table 13.
Clamp Corrections in Declination

Zone ± 2.5	$(E - W)_\delta / 2$	Zone ± 2.5	$(E - W)_\delta / 2$	Zone ± 2.5	$(E - W)_\delta / 2$	Zone ± 2.5	$(E - W)_\delta / 2$
+27.5	+0.37 \pm 0.02	- 7.5	+0.28 \pm 0.01	-42.5	+0.38 \pm 0.01	-77.5	+0.34 \pm 0.01
+22.5	0.35 0.01	-12.5	+0.29 0.01	-47.5	+0.35 0.01	-82.5	+0.37 0.02
+17.5	0.34 0.01	-17.5	+0.31 0.01	-52.5	+0.33 0.01	-87.5	+0.38 0.02
+12.5	0.33 0.01	-22.5	+0.33 0.01	-57.5	+0.32 0.01	-87.5 _{LC}	-0.37 0.01
+ 7.5	0.31 0.01	-27.5	+0.35 0.01	-62.5	+0.31 0.01	-82.5 _{LC}	-0.37 0.02
+ 2.5	0.28 0.01	-32.5	+0.36 0.01	-67.5	+0.31 0.01	-77.5 _{LC}	-0.40 0.02
- 2.5	+0.28 0.01	-37.5	+0.38 0.01	-72.5	+0.32 0.01	-72.5 _{LC}	-0.38 0.03

Solutions for Corrections to the Assumed Latitude and Refraction - The observations of 49 circumpolar FK4 and azimuth stars were used to find $\Delta\phi$, the correction to the assumed latitude, as well as $\Delta\psi_0$, the correction to the assumed constant of refraction. Values of $(O - C)_\delta$ for the upper and lower culmination observations are given in Table 14. No lower culmination observations made at a zenith distance greater than + 70.0 were used in the solution. The data (cols. 2 and 7 of Table 14) were modeled by an equation of the form

$$2\Delta\phi - \Delta\psi_0 \times (\tan z_{UC} + \tan z_{LC}) = (O - C)_{\delta_{LC}} - (O - C)_{\delta_{UC}},$$

where the zenith distance, z , is measured positive to the south.

A preliminary study showed that at lower culminations, starting at a zenith distance of approximately + 70.0, the declination system of this catalog begins to change and reaches a maximum average difference with respect to the upper culmination counterparts equal to - 0.25 at the zenith distance limit of + 77.2 (which corresponds to a declination of - 71.0 at lower culmination). For this reason, it seemed inadvisable to include stars observed at zenith distances greater than + 70.0 in this solution.

No correction term for the flexure was included in the condition equation because of the difficulty of separating the sine term of the horizontal flexure and tangent term of the refraction from the constant term when the latitude of an observing site is so close to the equator that it precludes the possibility of observing a large part of the meridional arc at lower culmination, but at the same time at zenith distances less than 70°.

Provisional Corrections to the Latitude and Refraction - In the adopted solution, equal weight was given to each observation equation regardless of the zenith distance and number of observations. The solution gave a correction to the latitude of $\Delta\phi = - 0.129 \pm 0.155$ and a correction to the refraction of $\Delta\psi_0 = - 0.176 \pm 0.090$.

These corrections were introduced into the preliminary declination system by means of the equation:

$$(O - C)_{\delta_{Provisional}} = (O - C)_{\delta_{Preliminary}} \mp 0.129 \pm 0.176 \tan z,$$

where upper signs were used for minor planets, the moon, and stars observed at upper culmination, and the lower signs were used for lower culmination observations.

Table 14.
Upper and Lower Culmination (O-C)'s in Declination

In this table, the (O-C)'s referred to the preliminary declination system of 49 circumpolar FK4 and FK4 Sup stars used in the solution for corrections to the constant of refraction and the assumed latitude are given. Δ_{Obs} is the difference between the lower culmination (LC) and upper culmination (UC) (O-C)'s. Δ_{Comp} is the value of Δ computed from the least-squares solution for $\Delta\phi$, the correction to the assumed latitude, and $\Delta\theta_0$, the correction to the assumed constant of refraction. Δ' is the final difference after adjustment for nightly systematic differences of each individual tour with respect to the mean preliminary declination system and application of an equator correction from an analysis of the minor planet observations.

FK4/Sup No.	Tan z_{UC} +		(O-C) $_{LC}$	N_{LC}	(O-C) $_{UC}$	N_{UC}	Δ_{Obs}	Δ_{Comp}	Δ_{Obs} minus	Δ'_{Obs} minus
	Tan z_{LC}								Δ_{Comp}	Δ_{Comp}
53	3.751	-0.32	32		-0.68	91	+0.36	+0.40	-0.04	-0.01
90	3.691	-0.24	34		-0.69	50	0.45	0.39	+0.06	+0.13
166	3.596	+0.35	36		-0.14	23	0.49	0.38	+0.11	+0.08
264	3.553	+0.01	145		-0.33	164	0.34	0.37	-0.03	+0.05
331	3.727	+0.37	21		+0.10	62	0.27	0.40	-0.13	-0.12
401	3.770	+0.08	32		-0.58	70	0.66	0.41	+0.25	+0.20
411	3.586	+0.32	21		+0.01	39	0.31	0.37	-0.06	-0.01
459	3.697	+0.08	57		-0.28	127	0.36	0.39	-0.03	-0.08
542	3.721	+0.33	59		-0.10	68	0.43	0.40	+0.03	+0.03
611	3.781	-0.07	35		-0.45	68	0.38	0.41	-0.03	-0.05
839	3.572	+0.04	234		-0.28	175	0.32	0.37	-0.05	-0.02
916	3.320	+0.35	41		+0.10	53	0.25	0.33	-0.08	+0.06
917	3.437	+0.18	175		-0.38	184	0.56	0.35	+0.21	+0.18
918	3.289	+0.13	176		-0.40	240	0.53	0.32	+0.21	+0.14
919	3.318	+0.01	192		-0.29	226	0.30	0.33	-0.03	-0.01
920	3.240	+0.08	283		-0.06	255	0.14	0.31	-0.17	-0.17
921	3.275	+0.03	173		-0.18	165	0.21	0.32	-0.11	-0.13
922	3.240	+0.31	52		-0.10	53	0.41	0.31	+0.10	+0.04
923	3.229	+0.35	42		+0.20	29	0.15	0.31	-0.16	-0.10
924	3.500	+0.11	167		-0.32	155	0.43	0.36	+0.07	+0.10
925	3.246	+0.43	214		-0.01	188	0.42	0.31	+0.11	+0.14
1424	3.752	+0.27	201		+0.01	169	0.26	0.40	-0.14	-0.14
1455	3.550	+0.10	195		-0.20	135	0.30	0.37	-0.07	-0.10
1655	3.234	+0.40	207		+0.12	164	0.28	0.31	-0.03	+0.02
1656	3.288	+0.47	231		+0.15	260	0.32	0.32	0.00	+0.01
1657	3.236	+0.52	64		+0.01	17	0.51	0.31	+0.20	+0.07
1658	3.411	+0.31	176		-0.08	188	0.39	0.34	+0.05	+0.01
1659	3.324	+0.33	126		-0.02	167	0.35	0.33	+0.02	+0.01
1660	3.286	+0.33	113		-0.11	141	0.44	0.32	+0.12	+0.12
1661	3.258	+0.27	140		-0.20	194	0.47	0.32	+0.15	+0.18
1662	3.231	+0.06	35		-0.10	73	0.16	0.31	-0.15	-0.13
1663	3.285	-0.22	133		-0.44	163	0.22	0.32	-0.10	-0.05
1664	3.338	0.00	186		-0.26	216	0.26	0.33	-0.07	-0.05
1665	3.295	+0.20	254		-0.17	251	0.37	0.32	+0.05	+0.13
1666	3.341	+0.12	151		-0.24	175	0.36	0.33	+0.03	+0.01
1667	3.507	+0.09	227		-0.35	157	0.44	0.36	+0.08	+0.07
1668	3.337	+0.07	270		-0.23	232	0.30	0.33	-0.03	-0.05
1669	3.230	+0.48	20		+0.46	9	0.02	0.31	-0.29	-0.27
1670	3.281	+0.31	41		+0.08	31	0.23	0.32	-0.09	-0.04
2261	3.775	+0.25	134		-0.13	134	0.38	0.41	-0.03	-0.01
2642	3.752	-0.53	140		-0.89	248	0.36	0.40	-0.04	-0.10
2753	3.564	+0.70	129		+0.28	246	0.42	0.37	+0.05	+0.05
2791	3.624	+0.14	192		-0.02	209	0.16	0.38	-0.22	-0.23
3973	3.370	-0.31	158		-0.78	158	0.47	0.34	+0.13	+0.11
3974	3.428	-0.40	179		-0.82	201	0.42	0.35	+0.07	+0.06

Residual Tour Errors and the Revised Provisional System in Declination - At this point in the reduction process $(O - C)_\delta$'s of all upper culmination observations of FK4 stars were collected by star and a mean, $\langle (O - C)_\delta \rangle_i$, was formed for each individual FK4 star, i , in our observing list. Then for each tour, j , in the program, a mean residual difference for the tour was formed,

$$\langle (O - C) \rangle_j = \sum_{i=1}^N [(O - C)_\delta_{ij} - \langle (O - C)_\delta \rangle_i] / N$$

An exhaustive study of the individual residual differences within a tour gave no reason to believe that there was any significant variation with zenith distance within a tour. On the other hand, there was very convincing evidence that a large percentage of the tours differed significantly from the mean provisional system. In fact, there were eight tours for which the absolute value of the mean difference for the tour exceeded one second of arc with a mean error of 0.1 second of arc.

Out of concern for the homogeneity of the minor planet and stellar declination systems, and to improve the systematic reduction of SRS and other stars observed only a few times to the provisional system in declination, we applied the mean residual difference for each tour to every object observed in the tour, paying appropriate attention to the sign in the case of lower culmination observations.

This system of declinations was referred to as the revised provisional system. The application of tour-dependent corrections was viewed as having the same effect as the application of clock corrections in right ascension, with the exception that the reduction was not (as in the case of a preliminary clock correction) into the system of FK4, but into the independent revised provisional system of the instrumental declination system.

Definitive Adjustment of the Declination System - The final corrections to latitude and refraction were based on an analysis of all the minor planet observations whose declinations had been reduced to the revised provisional system described above. That analysis (see page 200) yielded an equator correction equal to $-0''.056 \pm 0''.016$.

The equator correction was viewed as having come from residual errors in the circumpolar solution for the provisional corrections to the assumed latitude and refraction. Subject to the two conditions that 1) at the pole, the difference between the revised provisional and the final declination systems should be zero, and 2) that at the mean observed declination of all minor planet observations $\langle \delta \rangle = +0.37$, the difference between the revised provisional and the final declination systems should be $-0''.056$, then the residual correction to the provisional latitude is $\Delta\phi = +0''.039$ and the correction to the refraction is $\Delta\psi_0 = -0''.0234$.

All $(O - C)_\delta$'s on the revised provisional system were referred to the final system using the equation:

$$(O - C)_{\delta_{\text{Final}}} = (O - C)_{\delta_{\text{Revised Provisional}}} \mp 0''.039 \pm 0''.0234 \tan z,$$

where upper signs applied to upper culmination and the lower signs to lower culmination observations, and z was measured positive to the south.

Application of the sum of the provisional and final latitude corrections to the initially assumed station latitude gives the instrumental astronomical latitude,

$$\delta = -31^\circ 48' 09''.87.$$

This latitude is referred to the conventional international origin.

The corrected constant of refraction determined during this program at El Leoncito (inclusive of the gravity term g_s/g_p) is thus $57''.264$.

Mean Errors - Following the procedure outlined in the section on right ascension mean errors, the best estimate of the mean error of one observation in declination characterized as a function of zenith distance and freed of the bias from small numbers of observations is:

$$ME_{1\delta}^2 = (0''.296)^2 + (0''.196)^2 \tan^2 z.$$

See Table 15 for a comparison of the mean error ϵ and the estimate σ_ϵ corrected for the small number bias.

Table 15.

Declination Mean Errors

Mean errors, ϵ , of a single observation in declination, given in 5° zones of zenith distance. Also given is the estimate of the standard deviation, σ_ϵ , obtained when ϵ is corrected for the bias due to small numbers of observations as described in the text.

Zenith Distance	All stars having two or more observations			Stars having only two or four observations		
	ϵ	σ_ϵ	N	ϵ	σ_ϵ	N
-57.5	$\pm 0''.409$	$\pm 0''.426$	135			
-52.5	0.345	0.362	139			
-45.5	0.347	0.367	172			
-42.5	0.327	0.345	173			
-37.5	0.280	0.333	664			
				(Two Observations)		
				$\pm 0''.261$	$\pm 0''.327$	484
-32.5	0.270	0.331	1604	0.264	0.331	1387
-27.5	0.256	0.313	1515	0.249	0.312	1300
-22.5	0.250	0.306	1361	0.241	0.301	1173
-17.5	0.258	0.316	1355	0.253	0.317	1174
-12.5	0.255	0.297	1380	0.236	0.296	716
				(Four Observations)		
-12.5	0.255	0.297	1380	$\pm 0''.259$	$\pm 0''.281$	433
- 7.5	0.261	0.283	1438	0.254	0.276	1129
- 2.5	0.263	0.286	1455	0.258	0.280	1130
+ 2.5	0.276	0.299	1698	0.274	0.297	1360
+ 7.5	0.270	0.293	1460	0.270	0.293	1152
+12.5	0.277	0.300	1323	0.275	0.298	1051
+17.5	0.283	0.306	1306	0.280	0.304	1020
+22.5	0.295	0.319	1130	0.291	0.316	875
+27.5	0.303	0.327	1039	0.298	0.323	807
+32.5	0.299	0.323	855	0.296	0.322	668
+37.5	0.312	0.337	709	0.309	0.335	542
+42.5	0.316	0.341	545	0.303	0.329	409
+47.5	0.336	0.361	386	0.324	0.352	262
+52.5	0.344	0.369	205	0.320	0.348	140
+57.5	0.392	0.424	60	0.376	0.408	40
+62.5	0.458	0.492	155	0.440	0.478	116
+67.5	0.540	0.584	355	0.531	0.577	278
+72.5	0.630	0.679	310	0.606	0.658	216

TABLE 15. (continued)

Zenith Distance	Stars having only four observations			FK4 stars having six or more observations		
	ϵ	σ_{ϵ}	N	ϵ	σ_{ϵ}	N
-57.5	± 0.390	± 0.410	66	± 0.442	± 0.453	26
-52.5	0.326	0.353	64	0.368	0.375	23
-47.5	0.360	0.379	68	0.349	0.355	28
-42.5	0.322	0.338	76	0.327	0.333	37
-37.5	0.313	0.328	55	0.317	0.320	42
-32.5	0.279	0.293	62	0.327	0.331	36
-27.5	0.289	0.304	54	0.306	0.309	43
-22.5	0.277	0.291	35	0.303	0.307	49
-17.5	0.281	0.295	41	0.301	0.303	43
-12.5	0.290	0.305	56	0.298	0.299	39
- 7.5	0.275	0.289	65	0.295	0.297	40
- 2.5	0.283	0.298	53	0.293	0.295	36
+ 2.5	0.300	0.315	72	0.309	0.310	58
+ 7.5	0.263	0.277	78	0.307	0.309	40
+12.5	0.281	0.296	64	0.303	0.305	51
+17.5	0.269	0.282	68	0.312	0.314	36
+22.5	0.293	0.308	56	0.320	0.322	39
+27.5	0.301	0.316	64	0.321	0.323	36
+32.5	0.308	0.324	61	0.334	0.336	29
+37.5	0.300	0.315	53	0.339	0.339	28
+42.5	0.328	0.345	43	0.333	0.334	19
+47.5	0.365	0.384	37	0.364	0.365	15
+52.5	0.369	0.388	16	0.455	0.458	2
+57.5	0.525	0.552	2	0.422	0.426	9
+62.5	0.688	0.723	5	0.450	0.453	3
+67.5	0.548	0.576	30	0.607	0.611	9
+72.5	0.660	0.694	27	0.733	0.741	20

THE MOON

Observations of the Moon received all of the corrections that were applied to observations of the stars. Additional corrections were necessary to allow for: irregularities of the lunar limb profile; the effects of irradiation, which cause the apparent diameter of the Moon, viewed as a bright disk against a dark background, to seem larger than the geometric diameter; the orbital motion of the Moon during the time it takes to make an observation; and the effects of geocentric parallax.

To calculate these corrections one needs to know the computed position of the Moon when it crosses the meridian. The geocentric right ascension, α , and declination, δ , of the meridian crossing of the center of the Moon were interpolated in a lunar ephemeris that has received the corrections necessary to place it on the system $j=2$ (Trans. of the IAU, Vol. XIIIIB, p. 49). To interpolate the ephemeris requires the Julian Date (JD) of the observation. The integral portion of the JD comes from any number of algorithms that link the calendar year, month, and day with the Julian Day. The fractional part of the JD is found from

$$0.997269566414 (\alpha + \lambda - \text{GAST}),$$

where λ is the longitude of the observatory and GAST is the Greenwich apparent sidereal

time at zero hours UTC. Because α is not known with precision initially, the fractional part of the JD must be iterated. The right ascension of the Moon, treated as a star, was used for the first iteration. A fourth-order Lagrangian formula sufficed for interpolation in the lunar ephemeris, and the process was iterated until the fractional part of the JD showed no further change. This also produced α . Also interpolated were δ and the horizontal parallax, π .

Required for lunar reductions are, in addition, the rates of change of α and δ with respect to mean solar time. These were computed by numerical differentiation with a fourth-order Lagrangian formula for the JD of the observation.

The longitude of the seven-inch transit circle that is necessary to calculate the fractional part of the JD has been determined experimentally to be

$$\lambda = 4^{\text{h}} 37^{\text{m}} 19^{\text{s}}.023$$

The practice at the U.S. Naval Observatory has been to use the time that the Moon crosses the actual meridian of the site-- the above value for the El Leoncito lunar observations-- and then to employ the resulting $(O - C)_{\alpha}$ to calculate the difference between UTC and Ephemeris Time, ΔT . (Notice the different usage for ΔT in this section compared to the section on the reductions of the stars. The notation is standard in both cases.) However, given the availability of atomic clocks since 1956 and their high intrinsic accuracy, it is debatable whether observations of the Moon contribute meaningfully to a determination of ΔT . Drs. G. Winkler and G. Hall of the U.S. Naval Observatory's Time Service Division are of the opinion that lunar observations possess little value for the post-1956 evaluation of ΔT . Therefore, in this catalog the time of crossing of the ephemeris meridian, rather than the actual meridian, was used to compute the theoretical position of the Moon. This change affects only the $(O - C)$ and not the observed right ascension and declination of the moon. The λ used to calculate α , δ , and the fractional part of the JD, which should now be called Julian Ephemeris Date (JED), was displaced westward from the actual meridian to correspond to

$$\lambda = 4^{\text{h}} 37^{\text{m}} 19^{\text{s}}.023 + 1.002737909 \Delta T.$$

The needed values of ΔT were taken from the annual volumes of The American Ephemeris and Nautical Almanac (now The Astronomical Almanac) and are:

Table 16.
Values of ΔT

	ΔT		ΔT		ΔT
1966.000	+36 ^s .54	1969.000	+39 ^s .20	1972.000	+42 ^s .22
1966.247	+36.76	1969.247	+39.45	1972.249	+42.52
1966.496	+36.99	1969.496	+39.70	1972.498	+42.82
1966.748	+37.18	1969.748	+39.91	1972.748	+43.07
1967.000	+37.43	1970.000	+40.18	1973.000	+43.37
1967.247	+37.65	1970.247	+40.45	1973.247	+43.67
1967.496	+37.87	1970.496	+40.70	1973.496	+43.96
1967.748	+38.04	1970.748	+40.89	1973.748	+44.19
1968.000	+38.29	1971.000	+41.16	1974.000	+44.48
1968.085	+38.37	1971.247	+41.41		
1968.249	+38.52	1971.496	+41.68		
1968.498	+38.75	1971.748	+41.92		
1968.749	+38.95				

The geocentric semidiameter of the Moon, SD , that is needed in the reduction formulas is found from the horizontal parallax:

$$SD = 0''.0799 + 0.272453\pi.$$

Mr. D.K. Scott of the U.S. Naval Observatory's Astrometry Department calculated the limb corrections for the lunar profile. These corrections, based on the charts of C.B. Watts (*Astron. Papers Amer. Eph.*, Vol. XVII), are the mean of six or seven points whose position angles bracket the observation point on the limb and have been corrected by a scale factor that depends on the ratio of the Moon's semidiameter at the time of observation to that at the Moon's mean distance from the Earth. The limb corrections were applied to the Moon's right ascension and declination, rather than to the semidiameter.

Because of the relative paucity of El Leoncito lunar observations, it was not possible to determine irradiation corrections on an observer by observer basis. Instead, constant corrections of $0^s.070$ in right ascension and $0''.75$ in declination were adopted. These are the standard values used in the lunar reductions of observations made by the U.S. Naval Observatory's six-inch transit circle in its W₅₀ program. The signs of the limb corrections are such that they are added to the observed right ascension and declination.

The orbital motion correction in right ascension accounts for the change in the position of the Moon's leading or trailing limb during the time between the first and the last tick measurements. To calculate this correction some ancillary formulas are necessary. Let ϕ be the astronomical latitude of the site. Analysis of above- and below-pole observations of stars shows that its value is $-31^{\circ}.802694$. Let ϕ' be the geocentric latitude of the site. The relation between ϕ and ϕ' can be found in any text on spherical astronomy. For this catalog the value of ϕ' was calculated by use of the equatorial radius and flattening of the Earth of the 1964 IAU system, as $-31^{\circ}.6305083$. Let

$$\begin{aligned} z &= (\phi' - \delta) \\ z' &= (\phi' - \delta') \\ \theta &= (3609.86 - \alpha)/3609.86 \\ F &= \sin z / (\sin z' \theta \cos \delta) \end{aligned}$$

Let α_l be the right ascension of the Moon's limb, treated as an observation of a star. Corrected for orbital motion α_l becomes

$$\alpha_{l,m} = \alpha_l + [a \sin (\phi - \delta') + b \cos (\phi - \delta') + c] \times \sec \delta' \times [F \times (\cos \delta' - 1)],$$

where the subscript m indicates orbital motion correction and a , b , and c are, respectively, the azimuth, level, and collimation of the transit circle at the mean time of an observation. In the present context the collimation constant is the difference, expressed in seconds of time, between the reading of the right ascension micrometer screw at the point where the collimation axis intersects the field of view and the average micrometer screw reading for the observation.

The right ascension of the limb must be reduced to the Moon's center. Let α_0 be the observed right ascension of the Moon's center, which is obtained from the relation

$$\alpha_0 = \alpha_{l,m} \pm SD / (\theta \cos \delta).$$

The plus sign is used if the leading limb was observed and the minus sign if the trailing limb was observed.

One additional, albeit minute, correction must be applied. The topocentric distance of the Moon differs sufficiently from the geocentric distance that the planetary aberration in the lunar ephemeris should be corrected by subtraction from α_0 of the quantity

$$0^s0008 (\cos \epsilon \cos \delta + \sin \epsilon \sin \delta \sin \alpha) \cos z \sec \delta,$$

where ϵ is the obliquity of the ecliptic.

As there is no geocentric parallax in right ascension, α_0 is the final, observed right ascension to compare with α in computing the $(O - C)_\alpha$.

To apply the orbital motion correction in declination, it is convenient to introduce the augmented semidiameter, SDA , defined

$$SDA = SD \sin z' / \sin z.$$

Let δ_ℓ be the observed declination of the limb treated as an observation of a star. Corrected for orbital motion, the declination of the limb becomes

$$\delta_{\ell,m} = \delta_\ell \pm \{ [\dot{\delta} / (3609.86 - \dot{\alpha})] \times ME_\alpha \times (RC - \sum_{i=1}^n R_i / n) \times \cos(\delta \pm SD) \} \\ \times \{ \sin[\phi' - (\delta \pm SD)] / \sin[\phi' - (\delta \pm SDA)] \}$$

where ME_α is the micrometer equivalent in right ascension, RC is the reading of the right ascension micrometer screw at the collimation point of the telescope, and R_i is the right ascension screw reading of an individual bisection, of which there is a total of n . The plus sign of the correction term as a whole is used for east clamp and the minus sign for west clamp. Within the trigonometric expression, the plus sign is used for the north limb and the minus sign for the south limb.

The declination of the Moon's limb must be reduced to the Moon's center. This is accomplished by the relation

$$\delta_0 = \delta_{\ell,m} \pm SDA,$$

where the plus sign is used for the south limb and minus sign for the north limb. We must use SDA , rather than SD , for the reduction to the center in declination because geocentric parallax does not vanish in declination. The orbital motion correction in right ascension allows for the small difference between the geocentric and topocentric motion of the Moon during the time required to cover the distance between the mean tick in right ascension and the meridian. The reduction to the center then uses SD . The orbital motion correction in declination allows for the Moon's motion in declination during the time necessary to make the observation. But the corrected limb is still topocentric. Therefore, the reduction to the center requires SDA .

Before δ_0 can be considered final, two further corrections are necessary. As with right ascension, we must correct for the difference between topocentric and geocentric planetary aberration and subtract from δ_0 the small quantity

$$0^s012 \cos \alpha \sin \epsilon \cos z.$$

The refraction correction for observations assumes that the observed body is at an infinite distance from the Earth. The moon is sufficiently close, however, that one must allow for the difference between topocentric and geocentric refraction. Added to δ_0 is the small quantity

$$0.07576 \sin \pi \sin (\phi' - \delta) / \cos^2 z.$$

δ_0 is the observed topocentric declination of the center of the Moon. The geocentric declination, δ_g , of the center follows from

$$\delta_g = \delta_0 + \sin^{-1} [\rho \sin \pi \sin (\phi' - \delta_0)],$$

where ρ is the radius vector from the center of the Earth to the point of observation. A formula for the computation of ρ may be found in any text on spherical astronomy. δ_g is the quantity to compare with δ in computing $(O - C)_\delta$. An alternative way to find $(O - C)_\delta$, and the one adopted for this catalog, is to refer the geocentric δ from the interpolated lunar ephemeris to the topocenter and compare it with δ_g . The formula for δ' , the topocentric ephemeris declination, is

$$\delta' = \delta - \tan^{-1} (\rho \sin \pi \sin (\phi' - \delta) / [1 - \sin \pi \cos (\phi' - \delta)]).$$

The advantage of the latter procedure is that errors in the observed declination do not enter the trigonometric expressions.

A useful quantity to exhibit with published positions of the Moon is Brown's lunation number. To calculate it one takes the JED of the observation, subtracts from it 2423407^d01389, the epoch that E.W. Brown adopted for his theory of the Moon, and divides by 29^d53059, the Moon's synodic period. The integer portion of the results of the operation is Brown's lunation number.

THE MINOR PLANETS AND THE EQUINOX AND EQUATOR SOLUTION

In theory, the minor planets should receive the same corrections as the Moon. In practice, many of the corrections are negligible. This facilitates the use of rectangular, rather than spherical, coordinates and makes the reductions easier and more transparent. The formulas for the minor planet reduction are, therefore, somewhat different from those for the Moon.

During the period that the minor planets were observed, 1049 observations were made, of which 15 were in the right ascension coordinate only. The distribution of the observations among the minor planets is:

<u>Minor planet</u>	<u>1 Ceres</u>	<u>2 Pallas</u>	<u>3 Juno</u>	<u>4 Vesta</u>	<u>Total</u>
Observations in α	334	239	176	300	1049
Observations in δ	327	238	170	299	1034

The mean epoch of observation was 1970.97 and the mean declination was + 0°.37.

The first step of the reduction is to calculate the JED of the observation. The procedure is similar to that used for the Moon. The fractional portion of the day is found by an iteration that employs the right ascension of the minor planet treated as a star for the first iteration. Then the α , δ , $\dot{\alpha}$, and $\dot{\delta}$ of the minor planet at the time of meridian transit are found from the pair of matrix equations

$$\begin{pmatrix} \rho \cos \alpha \cos \delta \\ \rho \sin \alpha \cos \delta \\ \rho \sin \delta \end{pmatrix} = \begin{pmatrix} x + X \\ y + Y \\ z + Z \end{pmatrix} \text{ and}$$

$$\begin{pmatrix} \dot{\rho} \\ \dot{\alpha} \rho \cos \delta \\ \dot{\delta} \rho \end{pmatrix} = \begin{pmatrix} \cos \alpha \cos \delta & \sin \alpha \cos \delta & \sin \delta \\ -\sin \alpha & \cos \alpha & 0 \\ -\cos \alpha \sin \delta & -\sin \alpha \sin \delta & \cos \delta \end{pmatrix} \begin{pmatrix} \dot{x} + \dot{X} \\ \dot{y} + \dot{Y} \\ \dot{z} + \dot{Z} \end{pmatrix},$$

where the second equation follows from the first by differentiation with respect to time. The quantity ρ is the geocentric distance of the minor planet. (Notice that this ρ is different from the one used in the lunar reductions; the notation is standard in both cases.) The heliocentric equatorial coordinates of the minor planet are x , y , and z , while the same coordinates of the Sun are denoted by X , Y , and Z .

The spherical coordinates and their rates of change were referred to the equinox of date by multiplication of the above matrix equations by the matrices of precession and nutation. Once the fractional portion of the day had converged, the ephemeris time correction ΔT was interpolated from the same table of ΔT values used for the lunar reductions to produce the JED.

Several tabulations of the rectangular coordinates of the minor planets 1,2,3, and 4 with respect to the Sun are available. Duncombe (*Astron. Papers Amer. Ephem.*, Vol. XX, Part II) calculated the minor planets' rectangular coordinates used in this investigation and Herget (*Astron. Papers Amer. Ephem.*, Vol. XIV) those of the Sun. These two tabulations have been employed in many investigations and seem to be free of any serious systematic error. The time derivatives of the rectangular coordinates were computed by numerical differentiation. The rectangular coordinates of the minor planets are tabulated at a ten-day interval, and for their velocity components a twelfth-order Lagrangian formula was used. A sixth-order Lagrangian formula sufficed for the Sun's velocity components, because the rectangular coordinates are tabulated at a four-day interval.

Let α' and δ' be the right ascension and declination of a minor planet uncorrected for orbital motion. The corrected right ascension is

$$\alpha = \alpha' + [\dot{\alpha}/(1.002737902 - \dot{\alpha})] \times [a \sin(\phi - \alpha) + b \cos(\phi - \delta) + c] \times \sec \delta,$$

where, as with the lunar reductions, a , b , and c are the azimuth, level, and collimation at the instant of observation. The numerical factor 1.002737902 is the ratio of the sidereal second to the mean solar second. Because $\dot{\alpha}$ was expressed as sidereal seconds per mean solar day, the numerical factor was multiplied by 86400 in the actual computer program.

The orbital motion correction in declination is found from

$$\delta = \delta' + \dot{\delta} \times ME_{\alpha} \times (RC - \sum_{i=1}^n R_i/n) / (1.002737902 \cos \delta)$$

where ME_{α} , RC , and R_i have the same meanings as in the lunar reductions and, once again, the numerical factor 1.002737902 was multiplied by 86400 in the computer routine.

It has been the practice at the U.S. Naval Observatory to refer the topocentric α and δ to the geocenter by the application of the geocentric parallax (see the formulas for the lunar reductions). However, photographic positions of minor planets are invariably published without the geocentric parallax correction, which an investigator can easily apply by use of increments in the solar coordinates that refer the geocenter to the topocenter. Therefore, in this catalog the published α and δ are topocentric rather than geocentric.

Branham (*Astron. J.*, 84, p. 1399, 1979) has already published an equator and equinox solution from the El Leoncito minor planet observations. The results presented here are based on the final analysis for the instrumental right ascension and declination system and instrumental constants. The equinox and equator determinations differ little from those already published.

The equations of condition were formed from partial derivatives that correct the orbits of the minor planets and the Earth, and correct the equator. The minor planets' osculating rectangular coordinates and velocities at epoch JD 2440800.5 (2 August 1970), rather than elliptic orbital elements, were corrected. The partial derivatives for these corrections were numerically integrated, based on Herget's procedure (*Astron. J.*, 73, p. 737, 1968). Brouwer and Clemence's (*Methods of Celestial Mechanics*, Academic Press, New York, pp. 244-247, 1961) partial derivatives for the Earth's orbit (set VI) were used. These solve for: $\Delta l'_0$, a correction to the mean anomaly at epoch of the earth's orbit; $\Delta \epsilon$, a correction to the obliquity; $\Delta e'$, a correction to the eccentricity; $\Delta \omega'$, a correction to the mean longitude at perihelion; and ΔE , the equinox correction. The partial derivatives for ΔD , the equator correction, are simply -1 added to the equations of condition in declination and 0 to those in right ascension.

Normal equations to solve simultaneously for all of the unknowns were formed in the usual manner. The differential correction procedure was iterated three times. The first iteration gave rise to a non-negligible correction of $\Delta D = -0.056 \pm 0.016$ to the fundamentally determined equator, which entailed the correction to the catalog declination system described earlier (see pages 194 and 195). The second iteration gave new values of $\Delta E = +0.0634 \pm 0.0155$ and $\Delta D = +0.004 \pm 0.016$, which indicated that no further corrections to the catalog declination system were necessary.

These first two iterations used ± 2.5 , in either right ascension or declination, as the cutoff value for an acceptable ($O - C$). This cutoff was not selected on the basis of any statistical theory, but on what R. Branham's experience with observing minor planets with a transit circle indicated as reasonable. After the final determination of the catalog right ascension and declination system and the final calculations for the instrumental constants, it was decided to perform one final differential correction. This time, statistical theory was used to determine the cutoff. Chauvenet's criterion for the rejection of a doubtful observation (W.M. Smart, *Combination of Observations*, Cambridge University Press, Sec. 8.02, 1958) dictated a value of ± 1.73 .

The distribution among the minor planets of the equations of condition whose $(O - C)$'s are within the acceptance criterion is:

Minor Planet	1 Ceres	2 Pallas	3 Juno	4 Vesta	Total
Equations in α	334	234	172	290	1030
Equations in δ	321	234	165	294	1014

The solution from this final iteration, along with the solutions given by the individual minor planets, is exhibited in Table 17. It should again be emphasized that the solution from the combined minor planet observations was obtained by a simultaneous adjustment of all of the parameters, and not by a combination of the results from individual minor planet solutions. Also shown in Table 17 are the mean errors of unit weight, $\sigma(1)$, and the condition numbers of the normal equations. This number is defined here as the ratio of the largest to the smallest eigenvalue of the matrix of the normal equations.

Table 17.

Solutions for Unknowns

	Combined Solution		1 Ceres		2 Pallas		3 Juno		4 Vesta	
ΔE	$0^{\circ}713 \pm 0^{\circ}138$		$0^{\circ}393 \pm 0^{\circ}256$		$0^{\circ}703 \pm 0^{\circ}422$		$1^{\circ}228 \pm 0^{\circ}405$		$0^{\circ}846 \pm 0^{\circ}210$	
ΔD	0.017	0.014	0.034	0.029	0.146	0.064	-0.019	0.054	-0.017	0.024
$\Delta \epsilon$	-0.014	0.050	-0.154	0.092	0.305	0.145	0.142	0.156	-0.095	0.074
$\Delta l'_0$	1.413	3.707	-3.245	7.713	-0.743	8.014	6.246	10.888	3.441	6.423
$\Delta \omega'$	-1.190	3.729	3.034	7.711	1.074	8.086	-5.623	11.067	3.057	6.427
$\Delta \sigma'$	-0.117	0.038	-0.290	0.116	0.162	0.122	-0.253	0.208	-0.044	0.097
$\sigma(1)$	0.321		0.318		0.327		0.360		0.301	
COND	6×10^7		2×10^8		2×10^8		4×10^7		7×10^7	

The correlation matrix that corresponds to the solution labelled "Combined Solution" in Table 17 is exhibited in Table 18, where the corrections for the elements of the Earth's orbit are given in Brouwer and Clemence's notation (*Methods of Celestial Mechanics*, Academic Press, New York, pp. 244-247, 1961):

$$\Delta \psi_1 = \Delta \epsilon$$

$$\Delta \psi_2 = -\Delta \omega' \sin \epsilon$$

$$\Delta \psi_3 = -\Delta E + \Delta \omega' \cos \epsilon$$

Because the instrumental right ascension system has been placed on the equinox of the Fourth Fundamental Catalog (FK4), ΔE represents a correction to the equinox of that catalog. The value from Table 17 agrees excellently with other determinations of the FK4 equinox, which Fricke (*Celest. Mech.*, 22, p. 113, 1980) summarizes. Values fall in the vicinity of $0^{\circ}78$ at epoch 1970.0. ΔD is a correction to the instrumental declination system. Its small value indicates that no further adjustment to that system is necessary.

This is the first time that a fundamental observing program has been based on minor planet observations alone, without the help of day objects or the major planets. This strong determination of the equinox and the small equator correction from objects that were observed at a station whose latitude is not too southerly are a consequence of the high percentage of clear nights throughout the program. During the five and a half years that the minor planets were observed at El Leoncito, about 80% of the nights were completely or partially usable. Hence, the number of minor planet observations is roughly twice what it would have been in Washington during the comparable period. Of course, if more minor planets were observed, and if the observing program were of longer duration, then it would still be possible to observe a fundamental program with a lower percentage of clear nights (R. L. Branham, *Celest. Mech.*, 22, p. 81, 1980)

Table 18.
Correlations Among Unknowns

	Δx_1	Δy_1	Δz_1	$\Delta \dot{x}_1$	$\Delta \dot{y}_1$	$\Delta \dot{z}_1$
Δx_1	1.000	-0.335	-0.078	0.549	-0.592	-0.422
Δy_1	-0.335	1.000	0.202	-0.833	-0.404	0.037
Δz_1	-0.078	0.202	1.000	-0.483	-0.105	0.033
$\Delta \dot{x}_1$	0.549	-0.833	-0.483	1.000	0.075	-0.012
$\Delta \dot{y}_1$	-0.592	-0.404	-0.105	0.075	1.000	-0.096
$\Delta \dot{z}_1$	-0.422	0.037	0.033	-0.012	-0.096	1.000
Δx_2	0.517	0.164	-0.060	0.052	-0.560	-0.237
Δy_2	0.110	0.395	0.139	-0.263	-0.364	-0.095
Δz_2	-0.005	-0.127	0.204	-0.067	0.127	-0.107
$\Delta \dot{x}_2$	-0.351	-0.267	0.086	0.076	0.504	0.164
$\Delta \dot{y}_2$	-0.481	0.414	0.265	-0.474	0.094	0.218
$\Delta \dot{z}_2$	0.223	-0.081	0.207	0.062	-0.200	0.024
Δx_3	0.717	-0.167	-0.102	0.368	-0.480	-0.300
Δy_3	-0.201	0.450	0.171	-0.386	-0.154	0.072
Δz_3	0.053	0.035	0.449	-0.173	-0.044	-0.100
$\Delta \dot{x}_3$	0.408	-0.480	-0.205	0.537	0.008	-0.131
$\Delta \dot{y}_3$	-0.369	-0.190	-0.029	0.003	0.482	0.104
$\Delta \dot{z}_3$	-0.084	0.016	-0.068	0.043	-0.068	0.289
Δx_4	0.691	0.019	-0.194	0.227	-0.600	-0.312
Δy_4	0.060	0.120	0.289	-0.048	-0.066	-0.088
Δz_4	-0.213	0.288	-0.261	-0.106	0.009	0.067
$\Delta \dot{x}_4$	0.099	-0.022	-0.141	-0.034	-0.124	-0.030
$\Delta \dot{y}_4$	-0.689	-0.032	0.087	-0.222	0.504	0.461
$\Delta \dot{z}_4$	-0.250	-0.003	-0.033	-0.099	0.383	-0.196
$\Delta l'_0 + \Delta \psi_3$	-0.052	0.415	0.073	-0.470	-0.330	0.009
$\Delta \psi_1$	0.072	-0.099	0.400	-0.003	-0.219	0.368
$\Delta \psi_2$	-0.245	0.266	-0.467	-0.057	-0.104	0.333
$e' \Delta \psi_3$	0.815	0.039	-0.093	0.242	-0.695	-0.393
$\Delta e'$	0.170	-0.565	-0.324	0.405	0.182	0.018
ΔD	-0.444	-0.137	0.034	-0.066	0.419	0.279

Table 18. (continued)

	Δx_2	Δy_2	Δz_2	$\dot{\Delta x}_2$	$\dot{\Delta y}_2$	$\dot{\Delta z}_2$
Δx_2	1.000	0.771	-0.141	-0.948	-0.019	0.078
Δy_2	0.771	1.000	-0.085	-0.835	0.574	-0.063
Δz_2	-0.141	-0.085	1.000	0.202	-0.172	-0.159
$\dot{\Delta x}_2$	-0.948	-0.835	0.202	1.000	-0.170	0.013
$\dot{\Delta y}_2$	-0.019	0.574	-0.172	-0.170	1.000	0.058
$\dot{\Delta z}_2$	0.078	-0.063	-0.159	0.013	0.058	1.000
Δx_3	0.497	0.093	-0.054	-0.337	-0.476	0.199
Δy_3	0.082	0.334	-0.093	-0.168	0.420	-0.036
Δz_3	0.004	0.117	0.282	0.038	0.137	0.201
$\dot{\Delta x}_3$	0.053	-0.296	-0.025	0.098	-0.535	0.085
$\dot{\Delta y}_3$	-0.422	-0.292	0.119	0.376	0.050	-0.141
$\dot{\Delta z}_3$	-0.030	-0.029	-0.196	0.009	0.060	0.051
Δx_4	0.619	0.232	-0.101	-0.520	-0.395	0.130
Δy_4	0.030	0.159	-0.040	0.041	0.156	0.082
Δz_4	0.007	0.126	-0.326	-0.090	0.192	-0.255
$\dot{\Delta x}_4$	0.144	0.001	0.122	-0.193	-0.136	0.014
$\dot{\Delta y}_4$	-0.568	-0.255	0.068	0.431	0.355	-0.089
$\dot{\Delta z}_4$	-0.242	-0.094	0.139	0.201	0.071	-0.244
$\Delta l_0' + \Delta \psi_3$	0.278	0.353	0.150	-0.423	0.254	0.032
$\Delta \psi_1$	0.000	0.006	0.073	0.048	0.097	0.419
$\Delta \psi_2$	0.049	0.061	-0.454	-0.184	0.132	-0.220
$e' \Delta \psi_3$	0.705	0.305	-0.090	-0.564	-0.407	0.195
$\Delta e'$	-0.104	-0.466	0.192	0.139	-0.547	0.038
ΔD	-0.438	-0.320	0.135	0.379	0.079	-0.029
	Δx_3	Δy_3	Δz_3	$\dot{\Delta x}_3$	$\dot{\Delta y}_3$	$\dot{\Delta z}_3$
Δx_3	1.000	0.060	0.070	0.315	-0.714	-0.153
Δy_3	0.060	1.000	0.155	-0.758	-0.692	-0.040
Δz_3	0.070	0.155	1.000	-0.235	-0.054	-0.594
$\dot{\Delta x}_3$	0.315	-0.758	-0.235	1.000	0.292	0.098
$\dot{\Delta y}_3$	-0.714	-0.692	-0.054	0.292	1.000	-0.072
$\dot{\Delta z}_3$	-0.153	-0.040	-0.594	0.098	-0.072	1.000
Δx_4	0.669	-0.070	-0.083	0.245	-0.443	-0.044
Δy_4	0.054	0.159	0.227	-0.034	-0.098	-0.052
Δz_4	-0.161	0.216	-0.337	-0.171	-0.024	0.107
$\dot{\Delta x}_4$	0.077	-0.074	-0.049	-0.037	-0.046	-0.033
$\dot{\Delta y}_4$	-0.659	0.043	-0.028	-0.260	0.400	0.184
$\dot{\Delta z}_4$	-0.261	-0.018	0.025	-0.084	0.273	-0.278
$\Delta l_0' + \Delta \psi_3$	-0.094	0.315	0.128	-0.518	-0.203	-0.050
$\Delta \psi_1$	0.055	0.019	0.285	-0.002	-0.138	0.300
$\Delta \psi_2$	-0.157	0.173	-0.571	-0.154	-0.078	0.371
$e' \Delta \psi_3$	0.782	-0.043	0.020	0.273	-0.527	-0.085
$\Delta e'$	0.168	-0.546	-0.182	0.460	0.205	0.008
ΔD	-0.382	-0.109	0.043	-0.028	0.321	0.093
	Δx_4	Δy_4	Δz_4	$\dot{\Delta x}_4$	$\dot{\Delta y}_4$	$\dot{\Delta z}_4$
Δx_4	1.000	-0.271	-0.093	0.434	-0.805	-0.328
Δy_4	-0.271	1.000	0.192	-0.899	-0.216	0.060
Δz_4	-0.093	0.192	1.000	-0.412	-0.043	0.206
$\dot{\Delta x}_4$	0.434	-0.899	-0.412	1.000	0.017	-0.092
$\dot{\Delta y}_4$	-0.805	-0.216	-0.043	0.017	1.000	-0.066
$\dot{\Delta z}_4$	-0.328	0.060	0.206	-0.092	-0.066	1.000
$\Delta l_0' + \Delta \psi_3$	0.206	-0.287	-0.048	0.465	0.017	-0.111
$\Delta \psi_1$	-0.063	0.070	-0.384	0.004	0.243	-0.543
$\Delta \psi_2$	0.049	-0.274	0.546	0.086	0.190	-0.214
$e' \Delta \psi_3$	0.859	0.079	-0.081	0.139	-0.844	-0.293
$\Delta e'$	0.109	-0.506	-0.341	0.384	0.113	-0.054
ΔD	-0.502	-0.119	-0.144	-0.007	0.557	0.070

Table 18. (continued)

	$\Delta l'_0 + \Delta \psi_3$	$\Delta \psi_1$	$\Delta \psi_2$	$e' \Delta \psi_3$	$\Delta e'$	ΔD
Δx_1	-0.052	0.072	-0.245	0.815	0.170	-0.444
Δy_1	0.415	-0.099	0.266	0.039	-0.565	-0.137
Δz_1	0.073	0.400	-0.467	-0.093	-0.324	0.034
$\dot{\Delta x}_1$	-0.470	-0.003	-0.057	0.242	0.182	-0.066
$\dot{\Delta y}_1$	-0.330	-0.219	-0.104	-0.695	0.182	0.419
$\dot{\Delta z}_1$	0.009	0.368	0.333	-0.393	0.018	0.279
Δx_2	0.278	0.000	0.049	0.705	-0.104	-0.438
Δy_2	0.353	0.006	0.061	0.305	-0.466	-0.320
Δz_2	0.150	0.073	-0.454	-0.090	0.192	0.135
$\dot{\Delta x}_2$	-0.423	0.048	-0.184	-0.564	0.139	0.379
$\dot{\Delta y}_2$	0.254	0.097	0.132	-0.407	-0.547	0.079
$\dot{\Delta z}_2$	0.032	0.419	-0.220	0.195	0.038	-0.029
Δx_3	-0.094	0.055	-0.157	0.782	0.168	-0.382
Δy_3	0.315	0.019	0.173	-0.043	-0.546	-0.109
Δz_3	0.128	0.285	-0.571	0.020	-0.182	0.043
$\dot{\Delta x}_3$	-0.518	-0.002	-0.154	0.273	0.460	-0.028
$\dot{\Delta y}_3$	-0.203	-0.138	-0.078	-0.527	0.205	0.321
$\dot{\Delta z}_3$	-0.050	0.300	0.371	-0.085	0.008	0.093
Δx_4	0.206	-0.063	0.049	0.859	0.109	-0.502
Δy_4	-0.287	0.070	-0.274	0.079	-0.506	-0.119
Δz_4	-0.048	-0.384	0.546	-0.081	-0.341	-0.144
$\dot{\Delta x}_4$	0.465	0.004	0.086	0.139	0.384	-0.007
$\dot{\Delta y}_4$	0.017	0.243	0.190	-0.844	0.113	0.557
$\dot{\Delta z}_4$	-0.111	-0.543	-0.241	-0.293	-0.054	0.070
	$\Delta l'_0 + \Delta \psi_3$	$\Delta \psi_1$	$\Delta \psi_2$	$e' \Delta \psi_3$	$\Delta e'$	ΔD
$\Delta l'_0 + \Delta \psi_3$	1.000	0.095	0.158	0.148	-0.027	-0.097
$\Delta \psi_1$	0.095	1.000	-0.133	-0.019	0.054	0.154
$\Delta \psi_2$	0.158	-0.133	1.000	-0.095	-0.040	0.015
$e' \Delta \psi_3$	0.148	-0.019	-0.095	1.000	-0.016	-0.588
$\Delta e'$	-0.027	0.054	-0.040	-0.016	1.000	0.317
ΔD	-0.097	0.154	0.015	-0.588	0.317	1.000

Systematic Differences - Comparisons of the WL50 observations with the FK4 catalog are shown in Tables 19 and 20 where the $(O - C)$'s have been combined into groups of three hours of right ascension by five degrees of declination. For each group, the numbers shown give the mean $(O - C)$ difference, the standard deviation of that mean, and the number of stars in the group. The mean $(O - C)$ difference for each star in the group was given equal (unit) weight in forming the group means, regardless of the number of observations. The lower culmination differences, given separately, are referenced to the right ascensions of the stars, not to their observed times of transit, which differ by 12 hours.

During the preparation of the introduction of the WL50 catalog, the FK5 catalog was published, making it possible to compare the WL50 and FK5 systems. We have made the comparisons in the FK4 system using individual corrections to the FK4 positions and proper motions developed at the Astronomisches Rechen-Institut. $(O - C)$'s of the FK4 stars were corrected, taking into account the proper motion corrections and the difference between the mean epoch of observation and B1950.0. New comparisons were calculated and are shown in Tables 21 and 22. Table 23 shows the right ascension and declination differences by declination zone combined over the entire 24 hours of right ascension, for both the FK4 and the corrected FK4 catalogs.

An inspection of the two sets of data clearly shows improvement when the corrected FK4 ($O - C$)'s are used. In general, not only do the absolute values of the differences decrease, but the standard deviations also show a very substantial decrease. Small systematic differences between WL50 and the FK5 catalog in the FK4 system still exist, but it is not possible to determine whether these terms are the result of systematic trends in the WL50, residual effects in the corrected FK4, or a combination of the two. The interpretation of the differences is also complicated by the correlation between the WL50 observations and the corrections to the FK4 system, since the WL50 observations, among others, contributed to the revision of the FK4 catalog and the formation of the FK5 system.

Four of the observed FK4 stars are binaries with published orbits and for which the published positions in the FK4 are for the center of gravity of the system. Although corrections to the position of the primary are available, we decided to exclude them from the study. The stars in question are FK4 257, 291, 538, and 616. These are Sirius, Procyon, α Centauri, and Antares, respectively.

Table 19. Right Ascension Differences, WL50 - FK4
Ascend

Zone	0 ^h - 3 ^h	3 ^h - 6 ^h	6 ^h - 9 ^h	9 ^h - 12 ^h	12 ^h - 15 ^h	15 ^h - 18 ^h	18 ^h - 21 ^h	21 ^h - 24 ^h
+30 to +25	.006 ±.011 8	.000 ±.008 7	-.005 ±.008 10	-.022 ±.016 4	-.004 ±.005 8	-.007 ±.016 9	.001 ±.006 8	.000 ±.010 6
25 to 20	.004 .005 7	.004 .004 9	-.002 .005 9	-.006 .006 6	.004 .013 4	-.007 .011 6	-.001 .013 6	-.005 .006 8
20 to 15	.003 .013 10	.001 .004 10	.002 .005 6	-.006 .009 6	-.000 .009 7	-.006 .005 9	.005 .020 9	.006 .011 6
15 to 10	-.001 .004 4	.002 .015 4	-.003 .008 7	-.008 .008 8	-.008 .004 6	-.003 .005 5	-.003 .007 7	-.004 .009 6
10 to 5	.010 .009 12	.006 .007 11	.004 .006 7	.002 .004 7	-.003 .012 6	-.002 .006 8	.003 .005 9	-.003 .010 11
5 to 0	.012 .006 7	.011 .007 5	.009 .010 6	-.003 .006 9	-.005 .005 7	.005 .011 8	.006 .009 5	-.004 .006 6
0 to -5	.004 .007 5	.013 .006 10	.012 .006 10	.006 .008 10	-.002 .009 5	.005 .011 7	.006 .009 11	-.004 .011 9
-5 to -10	.008 .006 7	.015 .007 13	.017 .014 4	.008 .008 6	.004 .006 11	-.001 .006 6	.003 .006 9	.004 .008 9
-10 to -15	.008 .007 8	.010 .014 6	.018 .007 6	.006 .008 7	.005 .006 9	.008 .006 8	.003 .006 7	.004 .007 9
-15 to -20	-.005 .016 8	.022 .006 4	.013 .005 6	.005 .006 8	.001 .006 9	.000 .006 9	.003 .008 9	-.005 .006 8
-20 to -25	-.004 .014 8	.004 .011 9	.001 .011 8	-.002 .013 4	-.012 .011 9	-.015 .011 6	-.002 .012 7	-.011 .010 7
-25 to -30	-.009 .012 6	-.008 .012 5	-.004 .007 6	-.012 .005 7	-.013 .012 6	-.016 .010 9	-.014 .009 10	-.015 .007 7
-30 to -35	-.009 .020 6	-.003 .011 7	.002 .004 6	-.019 .009 7	-.012 .011 6	-.008 .007 6	-.025 .026 5	-.016 .014 7
-35 to -40	.009 .018 6	.003 .006 5	.005 .023 5	-.004 .021 4	-.009 .011 6	-.007 .010 8	-.001 .013 6	-.015 .018 6
-40 to -45	-.002 .016 8	.001 .027 7	.002 .014 6	.002 .016 6	-.002 .011 8	-.012 .008 6	.001 .008 7	-.005 .009 4
-45 to -50	-.015 .017 6	-.001 .008 5	-.006 .015 5	-.026 .023 5	-.009 .013 5	-.017 .018 3	-.003 .015 5	-.010 .009 7
-50 to -55	-.016 .025 4	-.002 .038 4	-.012 .017 6	-.023 .012 3	-.013 .010 4	-.014 .010 7	-.011 .015 5	-.001 .024 6
-55 to -60	-.024 .019 3	-.008 .014 6	.002 .015 3	-.002 .007 5	-.005 .022 5	-.012 .009 4	-.011 .020 4	-.004 .019 3
-60 to -65	-.019 .007 4	-.017 .008 6	-.000 .016 3	-.001 .009 6	-.030 .011 5	-.028 .012 4	-.022 .026 3	-.027 .029 2
-65 to -70	-.024 .015 5	-.013 .031 2	-.022 .007 3	-.040 .013 4	-.019 .021 3	-.037 .014 4	-.011 .019 2	-.039 .003 4
-70 to -75	-.027 .017 2	-.032 .009 4	-.017 .009 4	-.026 .017 3	-.043 .011 2	-.029 .001 2	-.032 .013 2	-.019 .021 2
-75 to -80	-.032 .017 4	-.028 .004 3	-.042 .010 2	-.008 .004 2	-.020 .017 4	-.033 .014 3	-.013 .003 3	-.041 .003 2
-80 to -85	0	-.006 .009 4	-.010 .000 1	-.001 .036 2	-.026 .000 1	-.016 .010 2	-.012 .008 2	-.006 .002 2
-85 to -90	-.006 .019 4	-.031 .000 1	-.023 .009 2	-.037 .024 2	-.039 .000 1	-.014 .005 2	-.007 .029 2	-.008 .013 3
-90 to -85SP	-.007 .014 4	-.031 .000 1	-.023 .009 2	-.032 .025 2	-.041 .000 1	-.016 .004 2	-.007 .021 2	-.001 .019 3
-85 to -80SP	0	-.008 .011 4	-.006 .000 1	.001 .034 2	-.026 .000 1	-.015 .011 2	-.013 .012 2	-.008 .002 2
-80 to -75SP	-.031 .014 4	-.032 .005 3	-.038 .012 2	-.013 .002 2	-.023 .016 4	-.034 .018 3	-.014 .006 3	-.039 .003 2
-75 to -70SP	-.030 .016 2	-.038 .004 4	-.026 .011 3	-.039 .021 2	-.052 .010 2	-.031 .001 1	-.037 .019 2	0

Table 20. Declination Differences, WL50 - FK4

Zone	$\Delta\delta$									
	$0^h - 3^h$	$3^h - 6^h$	$6^h - 9^h$	$9^h - 12^h$	$12^h - 15^h$	$15^h - 18^h$	$18^h - 21^h$	$21^h - 24^h$		
+30 to +25	$-.16 \pm .24$ 8	$-.05 \pm .21$ 7	$-.05 \pm .10$ 10	$-.30 \pm .17$ 4	$-.01 \pm .15$ 8	$-.14 \pm .20$ 9	$-.16 \pm .20$ 8	$-.03 \pm .32$ 6		
25 to 20	-.08 .16 7	-.05 .13 9	-.02 .19 9	-.05 .15 6	.00 .11 4	-.02 .21 6	.00 .16 6	-.10 .14 8		
20 to 15	-.01 .12 10	-.05 .15 10	.05 .10 6	.09 .07 6	.20 .24 7	-.02 .14 9	.05 .18 9	-.07 .07 6		
15 to 10	-.01 .08 4	-.02 .15 4	-.07 .10 7	.04 .12 8	.06 .08 6	-.01 .11 5	-.08 .17 7	-.13 .07 6		
10 to 5	.00 .17 12	-.06 .12 11	.02 .09 7	-.04 .10 7	-.01 .07 6	-.10 .28 8	.00 .15 8	-.06 .10 11		
5 to 0	.01 .08 7	.00 .10 5	.09 .21 6	.10 .07 9	.05 .13 7	-.03 .12 8	-.03 .08 5	-.13 .13 6		
0 to -5	.03 .08 5	-.06 .19 10	.01 .15 10	.12 .15 10	.11 .21 5	.04 .09 7	-.12 .12 11	-.15 .13 9		
-5 to -10	.01 .25 7	-.02 .08 13	.15 .06 4	.04 .08 6	-.01 .18 11	.14 .15 6	.08 .11 9	-.04 .12 9		
-10 to -15	-.01 .16 6	.18 .26 6	.20 .14 6	.18 .09 7	.08 .14 9	.09 .17 8	-.01 .17 7	.05 .09 9		
-15 to -20	.01 .10 8	.00 .10 4	.14 .19 6	.10 .12 8	.15 .12 9	.08 .11 9	.04 .13 9	-.02 .15 8		
-20 to -25	.01 .17 8	.05 .17 9	.05 .20 8	-.00 .13 4	.04 .22 9	.05 .16 6	-.01 .18 7	.03 .12 7		
-25 to -30	.16 .18 6	.09 .30 5	.07 .07 6	.02 .18 7	.06 .17 6	.05 .15 9	-.02 .13 10	.07 .15 7		
-30 to -35	.04 .06 6	.09 .18 7	-.00 .13 6	.06 .21 7	.14 .15 6	.04 .17 6	.02 .13 5	.05 .21 7		
-35 to -40	.00 .16 6	.21 .12 5	.11 .10 5	.23 .28 4	.10 .19 6	.11 .16 8	.06 .13 6	.09 .26 6		
-40 to -45	.05 .20 8	.17 .26 7	.16 .19 6	.18 .17 6	.04 .17 8	-.07 .22 6	.06 .12 7	.14 .14 4		
-45 to -50	-.13 .17 6	-.18 .18 5	.04 .15 5	-.05 .21 5	.04 .25 5	.04 .11 3	-.28 .24 5	-.03 .23 7		
-50 to -55	.01 .11 4	.04 .22 4	.01 .34 6	-.18 .17 3	.13 .27 4	.12 .22 7	-.12 .32 5	-.20 .12 6		
-55 to -60	-.27 .27 3	.00 .15 6	-.04 .19 3	.14 .17 5	.02 .26 5	.03 .10 4	.04 .13 4	-.04 .37 3		
-60 to -65	-.17 .09 4	.06 .17 6	.05 .10 3	-.07 .12 6	-.01 .19 5	-.13 .18 4	.21 .23 3	.02 .37 2		
-65 to -70	-.36 .15 5	.16 .13 2	.27 .34 3	.05 .14 4	.16 .35 3	.15 .36 4	-.13 .13 2	.16 .31 4		
-70 to -75	.06 .21 2	.04 .13 4	.17 .16 4	.15 .08 3	.21 .20 2	.28 .01 2	.08 .27 2	.21 .20 2		
-75 to -80	-.34 .38 4	.01 .19 3	.09 .02 2	-.36 .20 2	-.07 .15 4	-.09 .24 3	-.22 .20 3	-.19 .25 2		
-80 to -85	0	-.06 .16 4	-.27 .07 1	-.09 .15 2	-.20 .04 1	-.14 .00 2	-.19 .12 2	-.25 .01 2		
-85 to -90	.24 .05 4	-.01 .00 1	-.02 .10 2	-.32 .07 2	-.08 .01 1	.01 .08 2	.12 .16 2	.29 .25 3		
-90 to -85SP	.28 .05 4	.11 .01 1	.01 .12 2	-.27 .21 2	.05 .00 1	-.14 .05 2	.09 .06 2	.22 .08 3		
-85 to -80SP	0	.01 .09 4	-.32 .10 1	-.12 .18 2	-.21 .04 1	-.19 .07 2	-.18 .04 2	-.21 .09 2		
-80 to -75SP	-.40 .31 4	.04 .45 3	-.03 .03 2	-.24 .08 2	-.16 .16 4	-.23 .18 3	-.33 .18 3	-.26 .23 2		
-75 to -70SP	-.13 .16 2	-.34 .19 4	.02 .25 3	.17 .16 2	.04 .39 2	-.10 .01 1	-.24 .22 2	0		

Table 21. Right Ascension Differences, WL50 - FK4
Individual ARI corrections applied

Zone	$\Delta \cos \delta (\text{ARI})$									
	$0^h - 3^h$	$3^h - 6^h$	$6^h - 9^h$	$9^h - 12^h$	$12^h - 15^h$	$15^h - 18^h$	$18^h - 21^h$	$21^h - 24^h$		
+30 to +25	.008 ±.008 8	.004 ±.007 7	-.004 ±.007 10	-.014 ±.019 4	-.001 ±.005 8	.001 ±.007 9	.006 ±.005 8	.004 ±.010 6		
25 to 20	.005 .005 7	.007 .004 9	.004 .004 9	-.003 .007 6	.005 .003 4	-.002 .009 6	.005 .013 6	.002 .004 8		
20 to 15	.005 .011 10	.006 .004 10	.006 .004 6	-.002 .005 6	-.000 .004 7	.000 .004 9	.009 .017 9	.011 .008 6		
15 to 10	.006 .004 4	.001 .009 4	.001 .004 7	-.005 .006 8	-.004 .003 6	.001 .006 5	.000 .006 7	.005 .004 6		
10 to 5	.006 .003 12	.005 .004 11	.004 .003 7	-.000 .002 7	-.001 .005 6	.001 .003 8	.003 .004 9	.003 .005 11		
5 to 0	.006 .003 7	.004 .002 5	.008 .007 6	-.001 .003 9	-.002 .003 7	.003 .008 8	.007 .004 5	-.002 .003 6		
0 to -5	.003 .005 5	.006 .004 10	.006 .004 10	.002 .005 10	-.002 .006 5	.002 .006 7	.002 .004 11	-.002 .004 9		
-5 to -10	.004 .004 7	.008 .005 13	.008 .005 4	.002 .004 6	-.001 .003 11	-.003 .003 6	-.000 .004 9	.001 .005 9		
-10 to -15	.001 .003 8	.003 .004 6	.004 .006 6	-.000 .004 7	-.002 .004 9	.000 .003 8	-.003 .004 7	-.002 .004 9		
-15 to -20	-.001 .004 8	.005 .002 4	.006 .003 6	-.000 .003 8	-.005 .003 9	-.004 .004 9	-.001 .003 9	-.004 .004 8		
-20 to -25	-.002 .007 8	.001 .004 9	.001 .004 8	-.005 .003 4	-.008 .006 9	-.008 .006 6	-.003 .003 7	-.007 .005 7		
-25 to -30	-.003 .005 6	-.002 .002 5	-.001 .003 6	-.008 .004 7	-.009 .004 6	-.008 .004 9	-.009 .006 10	-.008 .004 7		
-30 to -35	-.005 .004 6	-.003 .004 7	.001 .005 6	-.008 .003 7	-.008 .004 6	-.008 .002 6	-.008 .005 5	-.010 .002 7		
-35 to -40	-.005 .004 6	-.001 .004 5	-.001 .007 5	-.008 .005 4	-.010 .006 6	-.009 .003 8	-.008 .008 6	-.011 .004 6		
-40 to -45	-.005 .003 8	-.003 .006 7	-.002 .005 6	-.008 .004 6	-.008 .006 8	-.013 .004 6	-.006 .003 7	-.008 .005 4		
-45 to -50	-.009 .004 6	-.005 .002 5	-.006 .006 5	-.015 .005 5	-.008 .004 5	-.013 .002 3	-.009 .003 5	-.010 .004 7		
-50 to -55	-.009 .007 4	-.001 .007 4	-.005 .002 6	-.007 .001 3	-.006 .001 4	-.012 .004 7	-.006 .004 5	-.003 .007 6		
-55 to -60	-.006 .004 3	-.000 .004 6	.005 .002 3	.000 .004 5	-.002 .001 5	-.003 .004 4	-.002 .004 4	.001 .002 3		
-60 to -65	.000 .004 4	.000 .004 6	.003 .004 3	.001 .003 6	-.003 .002 5	-.005 .004 4	-.005 .005 3	.000 .004 2		
-65 to -70	.000 .004 5	.004 .006 2	-.002 .003 3	-.005 .003 4	-.005 .002 3	-.010 .003 4	-.004 .001 2	-.009 .005 4		
-70 to -75	-.004 .003 2	.001 .005 4	-.001 .001 4	-.005 .002 3	-.006 .002 2	-.006 .006 2	-.005 .003 2	.002 .001 2		
-75 to -80	-.004 .005 4	-.001 .001 3	-.011 .001 2	-.002 .001 2	-.006 .007 4	-.009 .004 3	-.002 .002 3	-.008 .000 2		
-80 to -85	0	-.001 .003 4	-.005 .000 1	-.007 .008 2	-.008 .000 1	-.008 .002 2	.000 .003 2	-.001 .001 2		
-85 to -90	-.002 .008 4	-.012 .000 1	-.010 .004 2	-.014 .004 2	-.011 .000 1	-.005 .001 2	-.003 .016 2	.000 .006 3		
-90 to -85SP	-.003 .003 4	-.011 .000 1	-.010 .004 2	-.010 .006 2	-.013 .000 1	-.007 .000 2	-.003 .009 2	.006 .011 3		
-85 to -80SP	0	-.004 .003 4	-.001 .000 1	-.005 .006 2	-.007 .000 1	-.008 .003 2	-.001 .001 2	-.002 .005 2		
-80 to -75SP	-.003 .004 4	-.005 .000 3	-.007 .003 2	-.007 .007 2	-.009 .009 4	-.010 .007 3	-.003 .004 3	-.005 .000 2		
-75 to -70SP	-.006 .005 2	-.006 .005 4	-.014 .008 3	-.015 .001 2	-.014 .001 2	-.012 .000 1	-.011 .003 2	0		

Table 22. Declination Differences, WL50 - FK4
Individual ARI corrections applied

Zone	$\Delta\delta(\text{ARI})$									
	0 ^h - 3 ^h	3 ^h - 6 ^h	6 ^h - 9 ^h	9 ^h - 12 ^h	12 ^h - 15 ^h	15 ^h - 18 ^h	18 ^h - 21 ^h	21 ^h - 24 ^h		
+30 to +25	$-.09 \pm .22$ 8	$-.03 \pm .13$ 7	$-.07 \pm .09$ 10	$-.21 \pm .20$ 4	$-.01 \pm .14$ 8	$-.11 \pm .13$ 9	$-.13 \pm .13$ 8	$-.06 \pm .32$ 6		
25 to 20	$-.04$.12 7	$-.04$.11 9	$-.04$.16 9	$-.08$.16 6	$.04$.02 4	$.00$.21 6	$.05$.15 6	$-.01$.09 8		
20 to 15	$.02$.11 10	$-.07$.13 10	$.04$.09 6	$.01$.05 6	$.08$.14 7	$-.05$.09 9	$-.00$.17 9	$-.04$.11 6		
15 to 10	$.00$.04 4	$.01$.11 4	$-.05$.10 7	$.07$.08 8	$.07$.09 6	$.02$.06 5	$-.05$.10 7	$-.01$.07 6		
10 to 5	$.03$.12 12	$-.00$.09 11	$.00$.09 7	$.01$.09 7	$.05$.02 6	$-.02$.14 8	$.00$.08 9	$-.01$.06 11		
5 to 0	$.06$.04 7	$.02$.10 5	$.11$.16 6	$.11$.05 9	$.05$.07 7	$.02$.07 8	$-.02$.04 5	$-.01$.10 6		
0 to -5	$.02$.07 5	$.03$.13 10	$.03$.08 10	$.07$.09 10	$.07$.12 5	$.03$.06 7	$-.04$.06 11	$-.08$.09 9		
-5 to -10	$.01$.16 7	$-.04$.07 13	$.01$.05 4	$.03$.07 6	$.00$.09 11	$.06$.11 6	$.04$.06 9	$-.01$.09 9		
-10 to -15	$-.02$.07 8	$.08$.11 6	$.10$.06 6	$.06$.04 7	$.06$.11 9	$.06$.10 8	$-.06$.12 7	$.01$.06 9		
-15 to -20	$.03$.05 8	$.01$.06 4	$.05$.06 6	$.08$.08 8	$.08$.06 9	$.06$.08 9	$.04$.05 9	$.01$.06 8		
-20 to -25	$.04$.07 8	$.03$.10 9	$.03$.11 8	$.03$.05 4	$.08$.11 9	$.03$.08 6	$.01$.08 7	$.04$.05 7		
-25 to -30	$.04$.05 8	$.01$.11 5	$.02$.05 6	$.05$.06 7	$.06$.06 6	$.04$.08 9	$-.01$.09 10	$.04$.05 7		
-30 to -35	$.01$.07 6	$.03$.07 7	$.03$.07 6	$.07$.08 7	$.06$.06 6	$.02$.11 6	$.03$.02 5	$.02$.05 7		
-35 to -40	$.06$.02 6	$.10$.03 5	$.04$.03 5	$.15$.08 4	$.10$.08 6	$.07$.08 8	$.03$.05 6	$.04$.10 6		
-40 to -45	$-.02$.06 8	$.13$.10 7	$.05$.10 6	$.07$.06 6	$.02$.06 8	$.06$.07 6	$.01$.07 7	$.10$.04 4		
-45 to -50	$-.08$.10 6	$-.06$.05 5	$-.01$.08 5	$-.02$.08 5	$.06$.10 5	$.02$.04 3	$-.11$.08 5	$-.02$.07 7		
-50 to -55	$-.02$.02 4	$.05$.07 4	$.02$.13 6	$.00$.10 3	$.04$.08 4	$.05$.06 7	$-.03$.08 5	$-.09$.06 6		
-55 to -60	$-.19$.25 3	$-.00$.10 6	$.02$.07 3	$.07$.08 5	$-.01$.08 5	$.00$.04 4	$.02$.08 4	$-.03$.12 3		
-60 to -65	$-.11$.03 4	$-.04$.05 6	$.05$.04 3	$-.03$.06 6	$-.02$.10 5	$-.07$.08 4	$.05$.09 3	$-.10$.19 2		
-65 to -70	$-.25$.07 5	$.02$.06 2	$.06$.06 3	$-.01$.09 4	$-.03$.11 3	$.03$.08 4	$-.05$.07 2	$-.00$.12 4		
-70 to -75	$-.01$.11 2	$.02$.08 4	$.04$.03 4	$-.01$.02 3	$-.02$.08 2	$.07$.03 2	$-.06$.16 2	$-.05$.07 2		
-75 to -80	$-.10$.14 4	$-.03$.06 3	$.06$.01 2	$-.06$.05 2	$-.06$.04 4	$.04$.11 3	$-.06$.08 3	$-.12$.05 2		
-80 to -85	0	$.01$.08 4	$-.06$.00 1	$.01$.01 2	$-.04$.00 1	$-.06$.06 2	$-.08$.05 2	$-.05$.04 2		
-85 to -90	$.12$.07 4	$-.04$.00 1	$-.01$.07 2	$.01$.01 2	$-.07$.00 1	$.08$.05 2	$.04$.02 2	$.21$.24 3		
-90 to -85SP	$.16$.08 4	$.08$.00 1	$.02$.15 2	$.06$.13 2	$.06$.00 1	$-.07$.02 2	$.01$.09 2	$.14$.08 3		
-85 to -80SP	0	$.08$.06 4	$-.11$.00 1	$-.02$.04 2	$-.05$.00 1	$-.11$.01 2	$-.07$.03 2	$-.01$.12 2		
-80 to -75SP	$-.16$.16 4	$.01$.48 3	$-.06$.00 2	$.06$.06 2	$-.15$.13 4	$-.10$.06 3	$-.17$.08 3	$-.19$.04 2		
-75 to -70SP	$-.20$.26 2	$-.36$.14 4	$-.07$.12 3	$.00$.04 2	$-.18$.27 2	$-.29$.00 1	$-.37$.11 2	0		

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

Table 23. Declination Zone Differences, WL50 - FK4

Zone	$\Delta\alpha_g \cos \delta$	$\Delta\alpha_g \cos \delta$ (ARI)	$\Delta\delta_g$	$\Delta\delta_g$ (ARI)
+30 to +25	-.003 .012 60	.001 .010 60	-.10 .21 60	-.07 .17 60
25 to 20	-.001 .009 55	.003 .007 55	-.04 .15 55	-.02 .14 55
20 to 15	.001 .011 63	.004 .009 63	.03 .16 63	-.01 .12 63
15 to 10	-.004 .008 47	.000 .006 47	-.03 .12 47	.01 .09 47
10 to 5	.003 .009 71	.003 .004 71	-.03 .15 71	.01 .09 71
5 to 0	.003 .010 53	.003 .006 53	.01 .13 53	.05 .09 53
0 to -5	.006 .010 67	.002 .005 67	-.02 .17 67	.01 .10 67
-5 to -10	.007 .009 65	.002 .005 65	.03 .15 65	.01 .09 65
-10 to -15	.008 .008 60	.000 .004 60	.09 .16 60	.03 .10 60
-15 to -20	.003 .011 61	-.001 .005 61	.07 .13 61	.05 .07 61
-20 to -25	-.005 .013 58	-.004 .006 58	.03 .17 58	.04 .09 58
-25 to -30	-.012 .010 56	-.006 .005 56	.05 .17 57	.03 .06 56
-30 to -35	-.011 .015 50	-.006 .005 50	.06 .16 50	.03 .07 50
-35 to -40	-.003 .016 46	-.007 .006 46	.11 .18 46	.07 .07 46
-40 to -45	-.002 .015 52	-.007 .005 52	.09 .19 52	.05 .08 52
-45 to -50	-.011 .016 41	-.009 .005 41	-.07 .21 41	-.03 .09 41
-50 to -55	-.011 .019 39	-.006 .005 39	-.02 .25 39	.00 .09 39
-55 to -60	-.008 .016 33	-.001 .004 33	.00 .21 33	.00 .12 33
-60 to -65	-.017 .016 33	-.001 .004 33	-.02 .19 33	-.03 .08 33
-65 to -70	-.028 .017 27	-.004 .005 27	.04 .31 27	-.04 .13 27
-70 to -75	-.027 .013 21	-.003 .004 21	.14 .15 21	.01 .07 21
-75 to -80	-.027 .015 23	-.005 .005 23	-.15 .25 23	-.04 .09 23
-80 to -85	-.009 .013 14	-.004 .004 14	-.15 .12 14	-.03 .06 14
-85 to -90	-.016 .018 17	-.006 .008 17	.08 .22 17	.07 .13 17
-90 to -85SP	-.015 .018 17	-.005 .008 17	.08 .20 17	.07 .11 17
-85 to -80SP	-.010 .013 14	-.004 .004 14	-.13 .13 14	-.02 .09 14
-80 to -75SP	-.028 .014 23	-.006 .005 23	-.21 .25 23	-.11 .18 23
-75 to -70SP	-.036 .013 16	-.011 .006 16	-.11 .26 16	-.22 .19 16

**RESULTS OF OBSERVATIONS
OF THE
MOON AND MINOR PLANETS
1967-1973**

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EXPLANATION

The following pages contain the results of the individual observations of the Moon and the minor planets Ceres, Pallas, Juno, and Vesta. All observations have received the same corrections as the stars in the catalog plus the corrections for the object's orbital motion while being observed which are described in the text. An explanation of each column is given below.

MOON

- Col. 1—Brown's Luration Number.
Cols. 2 and 3—Greenwich Date and the Julian Ephemeris Date to five decimals. This represents the time at which the calculated position of the Moon (on the system $j = 2$) is on the *ephemeris meridian* of the transit circle.
Col. 4—Observer number from table 1.
Col. 5—East and west clamps by letters E or W.
Col. 6—Illuminated right ascension limb. 1 = leading; 2 = following.
Col. 7—Observed right ascension (hours, minutes, and seconds). If declination only, then seconds and columns 6, 8, and 9 are blank.
Col. 8—Observed minus computed right ascension. A correction based on orbital motion times ΔT has been applied.
Col. 9—Limb correction (seconds of time) from charts of C. B. Watts. The sign is that for a correction to the observed right ascension.
Col. 10—Illuminated declination limb. N = north; S = south.
Col. 11—Observed declination (degrees, minutes, and seconds). These positions are *topocentric* (no correction for parallax to reduce to the center of the earth has been applied). If right ascension only, the seconds and columns 10, 12, and 13 are blank.
Col. 12—Observed minus computed declination. A correction based on orbital motion times ΔT has been applied.
Col. 13—Limb correction (seconds of arc) from charts of C. B. Watts. The sign is that for a correction to the observed declination.

MINOR PLANETS

- Cols. 1 and 2—Greenwich Date and the Julian Ephemeris Date to five decimals. This represents the time at which the calculated position of the minor planet is on the *ephemeris meridian* of the transit circle.
Col. 3—The observer number from table 1.
Col. 4—East and west clamps by letters E or W.
Col. 5—Observed right ascension (hours, minutes, and seconds).
Col. 6—Observed minus computed right ascension. A correction based on orbital motion times ΔT has been applied.
Col. 7—Observed declination (degrees, minutes, and seconds). These positions are *topocentric* (no correction for parallax to reduce to the center of the earth has been applied). If right ascension only, the seconds and column 8 are blank.
Col. 8—Observed minus computed declination. A correction based on orbital motion times ΔT has been applied.
Col. 9—Visual magnitude, based on the formulas and constants from the Explanatory Supplement to the Astronomical Almanac and American Ephemeris and Nautical Almanac, 1961 (p. 208).
Col. 10—Distance, in astronomical units, calculated from the ephemeris of the minor planet when on the *ephemeris meridian* of the transit circle.

MOON

Lun	Greenwich Date	Julian Date	Ob C L	Right Ascen	(O-C)	L C	L Declination	(O-C)	L C		
608	1972	Feb. 24.02	244 1371.52988	7 W 1	6 17 04.479	+0.001	+0.035	N +26 55 03.85	-0.88 -0.11		
		Feb. 25.06	244 1372.56899	4 W 1	7 17 29.074	+0.047	+0.026	N +24 37			
		Feb. 26.10	244 1373.60552	11 W 1	8 14 10.347	+0.073	+0.054	N +20 58 42.65	-0.50 +0.29		
		Feb. 27.13	244 1374.63936	13 W 1	9 06 58.780	+0.037	+0.081	N +16 20 44.26	-0.68 +0.02		
		Feb. 28.17	244 1375.67086	7 W 1	9 56 24.753	+0.048	+0.024	N +11 03 15.87	-0.62 +0.37		
		Feb. 29.20	244 1376.70062	12 W 1	10 43 19.435	+0.008	+0.018	N +5 24			
		Mar. 1.22	244 1377.72931	8 W 2	11 28 41.641	-0.091	-0.008	S - 0 21 13.46	-2.21 +0.96		
		Mar. 2.25	244 1378.75762	15 W 2	12 13 30.884	-0.053	-0.007	S - 5 59 34.18	-0.47 +0.57		
		Mar. 3.28	244 1379.78620	12 W 2	12 58 43.537	-0.074	-0.006	S -11 19 04.52	-0.08 +0.42		
		Mar. 4.31	244 1380.81565	8 W 2	13 45 11.383	-0.029	-0.026	S -16 08 29.06	+0.07 -0.32		
		Mar. 5.34	244 1381.84647	12 W 2	14 33 37.842	-0.023	-0.023	S -20 16 30.85	+0.18 +0.62		
		Mar. 6.37	244 1382.87900	12 W 2	15 24 32.758	-0.015	-0.030	-23 31			
609	1972	Mar. 21.94	244 1398.44290	4 W 1	5 57 55.542	+0.057	-0.020	+27 07			
		Mar. 22.98	244 1399.48289	11 W 1	6 59 36.251	-0.044	+0.044	+25 17			
		Mar. 25.05	244 1401.55440	4 W 1	8 50 45.632	+0.021	+0.097	N +17 45 11.03	-0.57 +0.40		
		Mar. 26.08	244 1402.58619	14 W 1	9 40 35.557	-0.048	+0.016	N +12 43 52.98	-1.55 +0.56		
		Mar. 27.11	244 1403.61607	11 W 1	10 27 40.757	-0.062	+0.018	N +7 16 30.27	-0.22 +0.12		
		Mar. 29.17	244 1405.67294	12 W 1	11 57 41.180	-0.030	-0.004	S - 3 59 43.76	-1.26 +0.60		
		Mar. 30.20	244 1406.70129	12 W 2	12 42 33.725	-0.085	-0.002	S - 9 23 43.13	+0.17 +0.36		
		Mar. 31.23	244 1407.73038	15 W 2	13 28 30.497	-0.692	-0.018	S -14 22 39.54	+3.79 +0.10		
		Apr. 1.26	244 1408.76072	8 W 2	14 16 15.485	-0.056	-0.026	S -18 44 54.03	-0.40 -0.34		
		Apr. 2.29	244 1409.79261	15 W 2	15 06 15.312	-0.162	-0.027	-22 18			
		Apr. 3.32	244 1410.82617	15 W 2	15 58 39.178	-0.224	-0.030	-24 50			
		Apr. 5.39	244 1412.89718	4 W 2	17 49 04.866	+0.018	-0.060	-26 11			
Apr. 6.43	244 1413.93349	11 W 2	18 45 27.037	+0.121	-0.094	-24 47					
610	1972	Apr. 23.03	244 1430.53225	4 E 1	10 13 06.146	+0.020	+0.027	N + 8 48 47.23	+0.92 +0.21		
		Apr. 24.06	244 1431.56114	4 E 1	10 58 45.987	-0.008	-0.004	N + 3 15 28.72	+0.30 -0.13		
		Apr. 26.11	244 1433.61738	12 E 1	12 27 50.947	-0.040	-0.003	N - 7 44 08.69	+0.51 +0.32		
		Apr. 27.14	244 1434.64610	8 E 1	13 13 15.505	+0.010	-0.012	N -12 48 29.36	-0.36 +0.49		
		Apr. 28.17	244 1435.67597	15 E 1	14 00 20.519	+0.083	+0.002	-17 20			
		Apr. 30.24	244 1437.74049	8 E 2	15 41 23.445	-0.095	+0.002	S -23 59 47.94	-0.94 +1.54		
		May 1.27	244 1438.77511	8 E 2	16 35 19.270	-0.006	-0.041	S -25 42 19.31	+0.01 -0.55		
		May 2.31	244 1439.81075	11 E 2	17 30 43.263	+0.071	-0.054	S -26 07 21.04	-1.67 -0.49		
		May 4.38	244 1441.88227	4 E 2	19 21 52.731	+0.053	-0.013	N -22 52 11.21	-0.46 -0.09		
		May 5.41	244 1442.91702	7 E 2	20 16 00.170	+0.078	-0.069	N -19 18 42.61	-0.74 +0.37		
		611	1972	May 18.91	244 1456.41499	4 E 1	9 06 17.213	-0.049	+0.068	N +15 46 22.96	+0.43 +0.91
				May 19.94	244 1457.44690	11 E 1	9 56 18.953	-0.016	+0.009	N +10 29 04.73	-0.06 +0.04
May 22.00	244 1459.50525			13 E 1	11 28 26.954	-0.008	-0.023	N - 0 41 13.20	+0.67 +0.21		
May 24.06	244 1461.56186			15 E 1	12 58 04.349	-0.026	-0.008	-11 19			
612	1972	June 17.91	244 1486.41947	11 W 1	11 11 02.114	-0.008	+0.002	N + 1 17 00.20	-0.41 +0.13		
		June 18.94	244 1487.44814	13 W 1	11 56 22.500	-0.062	-0.041	N - 4 20 01.94	-0.41 +0.12		
		June 19.97	244 1488.47670	12 W 1	12 41 33.721	-0.051	-0.012	N - 9 39 47.88	+0.42 +0.15		
		June 21.00	244 1489.50588	8 W 1	13 27 38.659	+0.032	-0.002	N -14 32 37.94	-0.96 +0.37		
		June 24.10	244 1492.60217	8 W 1	15 58 30.111	+0.003	+0.015	N -24 41 55.24	+0.40 +0.90		
		June 29.28	244 1497.78045	11 W 2	20 35 38.756	+0.015	-0.021	N -17 23 52.68	-0.03 +0.09		
		June 30.31	244 1498.81375	7 W 2	21 27 39.875	-0.289	+0.138	N -12 23 14.31	-1.71 -0.41		
		July 3.41	244 1501.91085	12 W 2	23 59 42.339	-0.126	+0.134	N + 5 48 25.69	-1.06 +0.34		
613	1972	July 4.44	244 1502.94482	12 W 2	0 52 41.390	-0.281	+0.174	N +11 57 31.70	+0.49 +0.39		
		July 17.91	244 1516.41941	15 E 1	13 09 13.307	+0.012	-0.008	N -12 44 42.62	-0.17 +0.25		
		July 18.94	244 1517.44947	12 E 1	13 56 34.744	-0.026	-0.009	N -17 17 28.97	-0.74 +0.50		
		July 19.98	244 1518.48091	8 E 1	14 45 55.042	+0.020	+0.079	N -21 04 45.87	-0.06 +0.09		
		July 21.01	244 1519.51402	15 E 1	15 37 39.778	-0.063	-0.016	N -23 55 31.18	-0.72 +0.74		
		July 22.04	244 1520.54878	12 E 1	16 31 47.773	-0.017	+0.073	N -25 38 21.42	-0.17 +1.17		
		July 23.08	244 1521.58480	14 E 1	17 27 45.117	-0.026	-0.135	S -26 03 20.19	+1.50 -0.58		
		July 25.15	244 1523.65772	11 E 1	19 20 56.301	+0.027	+0.011	S -22 41 23.52	-0.78 -0.09		
614	1972	July 29.29	244 1527.79351	11 E 2	22 52 46.345	-0.367	+0.178	N - 2 28 36.51	-1.14 +0.47		
		Aug. 17.95	244 1547.45945	8 E 1	16 09 16.032	+0.019	+0.029	N -25 00 55.55	-0.04 +1.18		
		Aug. 23.13	244 1552.63804	11 E 1	20 46 51.387	+0.004	-0.079	S -16 23 31.86	-1.80 +1.24		
		Aug. 28.30	244 1557.80904	7 E 2	1 13 28.128	-0.335	+0.159	N +14 03 20.86	-1.24 +0.34		
		Aug. 29.34	244 1558.84649	8 E 2	2 11 29.623	-0.302	+0.140	N +19 22 47.58	-0.43 -0.07		
615	1972	Aug. 30.38	244 1559.88613	15 E 2	3 12 39.942	-0.218	+0.087	N +23 30 23.06	+0.25 -0.34		
		Sept. 15.94	244 1576.44066	8 E 1	17 36 27.659	-0.035	-0.150	N -25 45 15.90	-1.64 -1.94		
		Sept. 16.97	244 1577.47632	14 E 1	18 31 53.866	-0.039	-0.115	S -24 37 03.15	-2.19 +0.21		
		Sept. 20.08	244 1580.58091	7 E 1	21 14		S -13 37 08.87	-0.71 -0.55			
		Sept. 21.11	244 1581.61472	7 E 1	22 07 30.241	+0.052	-0.017	S - 7 54 42.13	-1.23 +0.38		
616	1972	Sept. 22.14	244 1582.64855	11 E 1	23 00 17.675	+0.005	+0.028	S - 1 35 27.89	-1.32 +0.62		
		Sept. 24.21	244 1584.71892	11 E 2	0 49 47.007	-0.482	+0.178	N +11 26 28.47	-1.17 +0.52		
		Sept. 27.33	244 1587.83906	8 E 2	3 55 06.263	-0.057	+0.015	N +25 12 58.86	-0.96 -0.27		
		Sept. 28.38	244 1588.88213	15 E	5 01		N +26 36 34.07	-1.92 +0.16			

MOON

Lun	Greenwich Date	Julian Date	Ob	C	L	Right Asc	(O-C)	L C	L	Declination	(O-C)	L C
616	1972 Oct.	15.95	244	1606.45649	8 E 1	19 57 36.204	+0.050	-.006	S	-19 57 17.28	-2.53	+0.98
		19.05	244	1609.55618	11 E 1	22 33 22.075	+0.026	+.021	S	- 4 41 50.33	-1.29	+0.80
		20.08	244	1610.58987	4 E 1	23 25 57.436	-0.022	+.043	S	+ 1 40 30.54	-1.41	+0.34
		21.12	244	1611.62497	7 E 1	0 20 35.147	+0.035	+.049	S	+ 8 11 11.11	-0.72	+0.20
		22.16	244	1612.66225	16 E 1	1 18 21.732	+0.040	+.035	N	+14 24 00.47	-0.82	+0.22
		23.20	244	1613.70226	11 E 2	2 20 03.727	-0.394	+.162	N	+19 47 46.98	-1.37	-0.12
	Oct.	24.24	244	1614.74495	15 E 2	3 25 39.324	-0.331	+.078	N	+23 49 57.62	-0.91	-0.58
617	1972 Nov.	14.96	244	1636.46632	4 E 1	22 10 04.272	+0.036	-.021	S	- 7 09 41.41	-1.11	+0.44
		23.28	244	1644.78170	12 E 2	6 17 00.034	-0.018	-.007	N	+25 27 58.62	+1.87	-0.32
		24.32	244	1645.82442	8 E 2	7 22 37.220	-0.139	+.046	S	+22 45 50.94	+0.21	+0.16
618	1972 Dec.	20.18	244	1671.68156	8 E 1	5 38 51.468	+0.000	-.146	N	+26 09 29.65	-0.86	-0.07
619	1973 Jan.	13.99	244	1696.49782	11 E 1	2 52 06.561	+0.009	-.072	S	+22 04 19.30	-0.15	-0.51
		15.03	244	1697.53952	11 E 1	3 56 15.784	-0.015	-.101	S	+25 03 15.79	-0.88	+0.28
		16.08	244	1698.58349	12 E 1	5 03 41.126	-0.093	-.053		+26 17		
		24.37	244	1706.87769	11 E 2	12 40 02.776	-0.086	-.008	S	- 9 40 50.02	+2.09	-0.92
620	1973 Feb.	13.03	244	1726.53528	15 E 1	5 44 28.799	+0.034	-.167		+25 59		
		19.25	244	1732.75726	15 E 2	11 28 38.962	-0.031	-.014	S	- 1 18 30.73	+1.92	-0.93
		21.31	244	1734.81963	4 E 2	13 06 35.875	-0.086	-.018	S	-12 18 55.61	+1.80	-1.02
		22.35	244	1735.85119	11 E 2	13 56 06.947	-0.034	-.001	S	-16 52 47.99	+1.66	-1.10
		23.38	244	1736.88355	7 E 2	14 46 46.909	-0.162	+.034	S	-20 34 45.43	+0.05	+0.80
621	1973 Mar.	16.10	244	1757.60307	8 E 1	9 24 35.010	+0.036	+.038	N	+12 48 51.78	+0.34	+0.79
		20.23	244	1761.73101	4 E 2	12 45 05.008	-0.020	-.024	S	- 9 56 52.63	+1.70	-0.98
		21.26	244	1762.76255	11 E 2	13 34 34.311	-0.092	+.007	S	-14 49 34.16	+2.05	-0.65
		22.29	244	1763.79485	7 E 2	14 25 08.820	-0.070	-.019	S	-18 55 08.35	-0.03	-0.31
		23.32	244	1764.82806	4 E 2	15 17 02.273	-0.160	+.038	S	-22 02 54.40	-0.82	+1.29
		24.36	244	1765.86210	11 E 2	16 10 08.294	-0.095	-.001	S	-24 04 25.93	-0.04	-0.24
622	1973 Apr.	9.94	244	1782.44336	8 E 1	7 12 31.764	+0.010	-.035	N	+22 43 10.32	-0.36	+0.03
		10.98	244	1783.48181	12 E 1	8 11 59.568	-0.056	+.017	N	+18 59 19.80	-0.44	+0.60
		12.01	244	1784.51755	8 E 1	9 07 32.694	+0.058	+.084	N	+14 15 33.89	-0.43	+1.07
		13.05	244	1785.55100	15 E 1	9 59 47.203	+0.071	+.033	N	+ 8 53 48.31	+0.23	-0.06
		17.17	244	1789.67552	11 E 1	13 15 20.609	-0.061	-.023	S	-12 58 47.18	+2.11	-0.86
		18.20	244	1790.70737	4 E 2	14 05 16.578	-0.091	-.007		-17 19		
		19.24	244	1791.74022	11 E 2	14 56 39.351	-0.176	+.032	S	-20 48 22.40	+0.02	+1.25
		24.41	244	1796.91092	8 E 2	19 22 51.236	-0.034	-.001	N	-21 04 17.27	-0.32	-0.25
623	1973 May	10.99	244	1813.49863	15 E 1	10 34 32.924	+0.050	+.013	N	+ 4 45 25.80	-2.37	+0.20
		12.02	244	1814.52960	12 E 1	11 23 12.518	-0.025	-.020	N	- 0 54 14.59	-0.39	-0.18
		13.06	244	1815.56002	8 E 1	12 11 04.492	-0.031	-.038	N	- 6 23 21.97	-1.54	-0.31
		18.22	244	1820.72164	7 E 2	16 24 09.443	-0.145	+.001	S	-24 06 51.81	+0.40	-0.33
		24.41	244	1826.91940	8 E 2	21 33 21.822	-0.238	+.116	N	-10 20 46.59	+0.19	-0.14
624	1973 June	8.97	244	1842.47576	16 E 1	11 55 51.848	-0.174	-.035	N	- 4 49 29.46	+0.67	-0.43
		10.00	244	1843.50636	16 E 1	12 43 59.177	-0.111	-.040	N	-10 04 06.96	+0.02	-0.38
		12.06	244	1845.56908	11 E 1	14 22 26.445	+0.050	+.023	N	-18 41 58.10	-0.62	+0.15
		14.13	244	1847.63575	7 E 1	16 06 35.552	-0.041	-.007	N	-23 43 37.43	-1.46	+1.29
		19.30	244	1852.80373	8 E 2	20 28 51.132	+0.050	-.057	N	-16 15 33.60	-0.76	-0.28

1 CERES

Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1968 Feb. 15.39	243 9901.89433	5 W	14 27 44.450 -0.022	- 1 45 49.67 +0.54	7.0	2.089727
Feb. 16.39	243 9902.89193	6 W	14 28 12.648 +0.014	- 1 45 07.72 +0.11	7.0	2.078132
Feb. 29.35	243 9915.85912	5 W	14 32 05.277 -0.020	- 1 25 38.10 -0.26	6.8	1.935459
Mar. 9.33	243 9924.83461	6 W	14 32 11.201 -0.002	- 1 02 06.88 +0.20	6.7	1.848416
Mar. 13.32	243 9928.82324	2 W	14 31 31.830 -0.004	- 0 49 36.45 -0.04	6.7	1.813692
1968 Mar. 20.30	243 9935.80262	6 W	14 29 21.577 +0.014	- 0 25 28.73 +0.49	6.6	1.759730
Mar. 22.29	243 9937.79657	4 W	14 28 30.360 -0.015	- 0 18 13.38 +0.15	6.6	1.746049
Mar. 27.28	243 9942.78114	2 W	14 25 56.591 -0.012	+ 0 00 16.51 -0.25	6.6	1.715545
Mar. 28.27	243 9943.77801	5 W	14 25 21.649 +0.008	+ 0 03 59.90 -0.05	6.6	1.710109
Mar. 30.27	243 9945.77170	5 W	14 24 07.779 +0.000	+ 0 11 25.08 +0.37	6.6	1.699930
1968 Apr. 2.26	243 9948.76212	4 W	14 22 07.740 -0.009	+ 0 22 22.89 +0.35	6.6	1.686438
Apr. 3.25	243 9949.75890	6 W	14 21 25.426 -0.022	+ 0 25 58.04 +0.12	6.6	1.682426
Apr. 5.25	243 9951.75243	6 W	14 19 57.704 +0.021	+ 0 33 01.15 +0.43	6.5	1.675143
Apr. 10.23	243 9956.73606	2 W	14 16 02.150 +0.009	+ 0 49 35.86 +0.21	6.5	1.661360
Apr. 12.22	243 9958.72945	2 W	14 14 22.589 +0.010	+ 0 55 42.36 +0.25	6.5	1.657648
1968 Apr. 25.18	243 9971.68605	2 W	14 02 57.886 -0.001	+ 1 24 54.41 +0.27	6.5	1.659234
Apr. 30.16	243 9976.66937	6 W	13 58 35.475 -0.017	+ 1 29 59.23 -0.09	6.6	1.671787
May 1.16	243 9977.66605	6 W	13 57 44.268 +0.000	+ 1 30 31.75 +0.05	6.6	1.675079
May 6.14	243 9982.64955	5 W	13 53 37.559 +0.018	+ 1 30 43.09 -0.25	6.6	1.695337
May 11.13	243 9987.63328	2 W	13 49 51.032 +0.003	+ 1 26 39.93 +0.27	6.6	1.721680
1968 May 16.11	243 9992.61731	6 W	13 46 29.935 -0.025	+ 1 18 20.48 +0.19	6.7	1.753742
May 17.11	243 9993.61415	5 W	13 45 53.143 -0.017	+ 1 16 10.59 +0.43	6.7	1.760808
May 21.10	243 9997.60167	7 W	13 43 38.248 -0.016	+ 1 05 50.33 -0.45	6.7	1.791152
May 24.09	244 0000.59247	7 W	13 42 10.695 -0.024	+ 0 56 24.48 +0.14	6.8	1.816001
May 25.08	244 0001.58943	7 W	13 41 44.226 -0.025	+ 0 52 56.41 -0.13	6.8	1.824663
1968 May 29.07	244 0005.57745	6 W	13 40 12.377 +0.007	+ 0 37 33.00 -0.14	6.8	1.861108
May 31.07	244 0007.57156	4 W	13 39 34.941 -0.034	+ 0 28 58.10 +0.23	6.8	1.880352
June 1.06	244 0008.56864	4 W	13 39 18.426 -0.013	+ 0 24 27.55 +0.21	6.8	1.890215
June 5.05	244 0012.55712	7 W	13 38 26.754 -0.005	+ 0 05 03.34 +0.41	6.9	1.931182
June 8.04	244 0015.54866	7 W	13 38 03.129 -0.038	- 0 10 52.40 -0.14	6.9	1.963386
1968 June 18.02	244 0025.52150	2 W	13 38 16.172 -0.048	- 1 11 24.38 -0.21	7.1	2.078585
June 19.01	244 0026.51887	7 W	13 38 25.025 -0.038	- 1 18 01.61 -0.17	7.1	2.090689
June 21.01	244 0028.51366	2 W	13 38 46.742 -0.012	- 1 31 32.62 +0.28	7.1	2.115173
June 22.01	244 0029.51108	7 W	13 38 59.530 -0.055	- 1 38 26.64 +0.22	7.1	2.127547
June 25.00	244 0032.50342	5 W	13 39 45.883 -0.009	- 1 59 39.75 +0.31	7.2	2.165160
1968 June 26.00	244 0033.50090	4 W	13 40 03.868 -0.023	- 2 06 54.40 +0.07	7.2	2.177850
June 27.99	244 0035.49590	6 W	13 40 43.631 -0.023	- 2 21 37.64 -0.16	7.2	2.203438
July 3.98	244 0041.48123	7 W	13 43 12.060 -0.014	- 3 07 30.96 -0.68	7.3	2.281643
July 4.97	244 0042.47883	7 W	13 43 40.901 -0.007	- 3 15 22.90 -0.10	7.3	2.294855
July 5.97	244 0043.47645	2 W	13 44 10.855 -0.017	- 3 23 18.83 +0.08	7.3	2.308111
1968 July 8.96	244 0046.46937	2 W	13 45 47.390 -0.010	- 3 47 27.16 +0.41	7.3	2.348112
July 9.96	244 0047.46704	4 W	13 46 21.738 +0.007	- 3 55 36.58 +0.26	7.4	2.361516
July 10.96	244 0048.46471	4 W	13 46 57.103 -0.009	- 4 03 48.69 +0.40	7.4	2.374952
July 11.96	244 0049.46240	5 W	13 47 33.541 +0.014	- 4 12 04.11 +0.09	7.4	2.388418
July 17.94	244 0055.44879	6 W	13 51 33.080 -0.005	- 5 02 29.89 +0.09	7.5	2.469727
1968 July 24.93	244 0062.43340	6 W	13 56 55.949 +0.001	- 6 03 02.53 -0.17	7.5	2.565230
1969 May 8.43	244 0349.93634	6 E	20 54 39.777 -0.022	-23 25 59.24 +0.50	7.7	2.605858
May 12.42	244 0353.92725	4 E	20 57 18.549 +0.016	-23 31 50.25 -0.03	7.7	2.554212
May 13.42	244 0354.92495	8 E	20 57 55.345 -0.016	-23 33 32.77 +0.20	7.7	2.541393
May 14.42	244 0355.92263	7 E	20 58 31.014 -0.012	-23 35 21.43 +0.52	7.7	2.528616
1969 May 19.41	244 0360.91083	9 E	21 01 11.345 -0.021	-23 46 02.76 +0.38	7.6	2.465510
May 25.39	244 0366.89619	9 E	21 03 42.420 -0.034	-24 02 33.16 -0.13	7.6	2.391948
May 27.39	244 0368.89119	10 E	21 04 22.350 -0.024	-24 08 57.74 +0.11	7.5	2.368074
May 31.38	244 0372.88100	7 E	21 05 26.052 -0.014	-24 23 10.08 +0.39	7.5	2.321455
June 3.37	244 0375.87319	4 E	21 05 59.355 -0.003	-24 35 02.70 +0.21	7.5	2.287583
1969 June 4.37	244 0376.87056	5 E	21 06 07.621 -0.000	-24 39 14.36 -0.04	7.5	2.276519
June 14.34	244 0386.84328	8 E	21 06 09.528 +0.020	-25 27 20.08 +0.06	7.4	2.173112
June 15.34	244 0387.84045	7 E	21 06 01.501 +0.023	-25 32 44.21 -0.17	7.4	2.163588
June 16.33	244 0388.83761	9 E	21 05 51.923 -0.012	-25 38 13.32 +0.57	7.3	2.154229
June 18.33	244 0390.83188	5 E	21 05 28.322 -0.008	-25 49 30.51 +0.25	7.3	2.136024
1969 June 23.31	244 0395.81724	9 E	21 04 03.043 -0.039	-26 19 13.89 +0.23	7.3	2.093689
June 24.31	244 0396.81427	8 E	21 03 41.589 -0.010	-26 25 24.46 +0.16	7.3	2.085797
June 29.29	244 0401.79912	9 E	21 01 32.653 +0.003	-26 57 12.68 -0.06	7.2	2.049405
July 11.26	244 0413.76121	8 E	20 54 06.916 -0.011	-28 16 54.77 +0.31	7.2	1.984930
July 13.25	244 0415.75471	8 E	20 52 36.245 +0.009	-28 30 10.39 +0.19	7.2	1.977610
1969 July 15.24	244 0417.74815	4 E	20 51 01.659 +0.008	-28 43 17.56 +0.24	7.2	1.971331
July 16.24	244 0418.74486	4 E	20 50 12.991 -0.017	-28 49 47.37 -0.03	7.2	1.968586
July 20.23	244 0422.73161	6 E	20 46 50.687 +0.028	-29 15 09.42 +0.14	7.1	1.960282
July 22.22	244 0424.72493	8 E	20 45 05.574 +0.011	-29 27 23.37 +0.49	7.1	1.957753
July 26.21	244 0428.71152	7 E	20 41 29.856 +0.001	-29 50 45.59 -0.45	7.1	1.955968
1969 July 28.20	244 0430.70479	8 E	20 39 40.223 +0.054	-30 01 47.08 +0.34	7.1	1.956713
Aug. 1.19	244 0434.69132	5 E	20 35 59.310 -0.002	-30 22 25.55 -0.61	7.2	1.961475
Aug. 6.17	244 0439.67451	8 E	20 31 25.375 -0.029	-30 45 10.12 -0.43	7.2	1.973529
Aug. 8.16	244 0441.66781	8 E	20 29 38.069 -0.023	-30 53 14.59 -0.42	7.2	1.980231
Aug. 11.15	244 0444.65780	7 E	20 27 01.019 -0.021	-31 04 10.41 +1.35	7.2	1.992265

1 CERES

Greenwich Date	Julian Date	Ob	C	Right Ascension	(O - C)	Declination	(O - C)	Mag	Distance
1968 Aug. 12.15	244 0445.65448	5	E	20 26 09.973	+0.003	-31 07 32.05	+0.08	7.2	1.996797
Aug. 13.15	244 0446.65117	4	E	20 25 19.611	-0.017	-31 10 43.46	-0.48	7.2	2.001586
Aug. 17.13	244 0450.63802	9	E	20 22 06.658	-0.040	-31 21 50.13	+0.06	7.2	2.023260
Aug. 19.13	244 0452.63152	8	E	20 20 36.047	+0.015	-31 26 26.06	-0.15	7.2	2.035566
Aug. 20.12	244 0453.62828	10	E	20 19 52.330	+0.018	-31 28 30.46	-1.09	7.2	2.042075
1969 Aug. 21.12	244 0454.62506	7	E	20 19 09.714	-0.008	-31 30 22.91	+0.42	7.3	2.048816
Aug. 24.11	244 0457.61548	9	E	20 17 09.114	-0.034	-31 35 08.35	+0.56	7.3	2.070399
Aug. 26.10	244 0459.60916	4	E	20 15 55.074	-0.003	-31 37 33.74	-0.31	7.3	2.085884
Sept. 1.09	244 0465.59059	5	E	20 12 45.437	-0.012	-31 41 16.41	-0.33	7.3	2.137296
Sept. 4.08	244 0468.58153	8	E	20 11 30.165	+0.009	-31 41 14.71	-0.14	7.4	2.165620
1969 Sept. 5.07	244 0469.57854	7	E	20 11 08.056	-0.016	-31 40 58.57	-0.34	7.4	2.175426
Sept. 8.06	244 0472.56970	8	E	20 10 11.069	-0.016	-31 39 24.13	-0.59	7.4	2.205884
Sept. 9.06	244 0473.56678	4	E	20 09 55.186	-0.020	-31 38 37.08	+0.13	7.4	2.216371
Sept. 13.05	244 0477.55531	4	E	20 09 07.481	-0.013	-31 34 21.48	-0.01	7.5	2.259878
Sept. 19.03	244 0483.53865	7	E	20 08 43.643	-0.013	-31 24 41.30	-0.14	7.5	2.329357
1969 Sept. 20.03	244 0484.53594	8	E	20 08 45.218	-0.004	-31 22 42.88	+0.42	7.6	2.341374
Sept. 21.03	244 0485.53325	7	E	20 08 48.327	-0.016	-31 20 40.41	-0.64	7.6	2.353505
Sept. 24.02	244 0488.52527	4	E	20 09 06.922	-0.005	-31 13 55.80	+0.58	7.6	2.390543
Sept. 27.01	244 0491.51745	4	E	20 09 39.052	-0.020	-31 06 25.92	+0.09	7.6	2.428473
Oct. 1.00	244 0495.50726	11	E	20 10 42.450	-0.045	-30 55 17.21	-0.28	7.7	2.480276
1969 Oct. 3.00	244 0497.50226	7	E	20 11 22.795	-0.004	-30 49 15.06	-0.45	7.7	2.506646
Oct. 3.99	244 0498.49979	7	E	20 11 45.002	-0.034	-30 46 07.01	-0.22	7.7	2.519937
Oct. 5.99	244 0500.49489	9	E	20 12 33.616	-0.028	-30 39 37.73	+0.42	7.7	2.546712
Oct. 8.98	244 0503.48766	5	E	20 13 56.594	-0.030	-30 29 23.67	-0.09	7.8	2.587310
Oct. 9.98	244 0504.48528	4	E	20 14 26.940	+0.023	-30 25 50.53	-0.03	7.8	2.600944
1969 Oct. 10.98	244 0505.48291	10	E	20 14 58.456	-0.028	-30 22 13.57	-0.19	7.8	2.614624
Oct. 13.97	244 0508.47590	7	E	20 16 40.796	+0.007	-30 10 58.02	+0.30	7.8	2.655899
Oct. 15.97	244 0510.47130	8	E	20 17 55.088	-0.040	-30 03 08.82	+0.27	7.9	2.683578
Oct. 17.96	244 0512.46675	11	E	20 19 14.201	-0.008	-29 55 05.20	-0.11	7.9	2.711355
1970 July 26.44	244 0793.94641	8	W	2 19 41.862	-0.015	+ 2 52 57.05	-0.09	7.9	2.747721
1970 July 27.44	244 0794.94422	8	W	2 20 28.499	-0.019	+ 2 54 41.55	-0.18	7.9	2.733955
July 31.43	244 0798.93535	7	W	2 23 26.548	-0.028	+ 3 00 39.76	-0.56	7.8	2.678903
Aug. 2.43	244 0800.93086	13	W	2 24 50.287	+0.020	+ 3 03 03.82	+0.47	7.8	2.651421
Aug. 4.42	244 0802.92632	11	W	2 26 10.234	+0.007	+ 3 05 01.73	-0.27	7.8	2.624000
Aug. 5.42	244 0803.92403	8	W	2 26 48.732	-0.040	+ 3 05 52.11	-0.04	7.7	2.610319
1970 Aug. 6.42	244 0804.92174	10	W	2 27 26.334	-0.007	+ 3 07 11.50	-0.08	7.7	2.596662
Aug. 9.41	244 0807.91478	11	W	2 29 13.045	-0.008	+ 3 08 32.27	+1.09	7.7	2.555862
Aug. 10.41	244 0808.91243	11	W	2 29 46.602	+0.022	+ 3 08 32.27	+1.09	7.7	2.542330
Aug. 11.40	244 0809.91008	7	W	2 30 19.067	+0.004	+ 3 08 44.31	-0.39	7.7	2.528835
Aug. 17.39	244 0815.89568	9	W	2 33 11.166	-0.020	+ 3 07 58.55	+0.04	7.6	2.448835
1970 Aug. 19.39	244 0817.89078	8	W	2 33 59.534	+0.030	+ 3 06 54.98	+0.52	7.6	2.422602
Aug. 20.38	244 0818.88831	11	W	2 34 21.844	-0.052	+ 3 06 13.54	+0.24	7.6	2.409580
Aug. 22.38	244 0820.88332	8	W	2 35 03.083	+0.014	+ 3 04 32.73	-0.06	7.5	2.383740
Aug. 24.37	244 0822.87828	12	W	2 35 39.281	-0.034	+ 3 02 27.38	-0.75	7.5	2.358195
Aug. 25.37	244 0823.87573	4	W	2 35 55.529	-0.018	+ 3 01 17.05	+0.23	7.5	2.345542
1970 Aug. 26.37	244 0824.87318	7	W	2 36 10.488	-0.009	+ 2 59 59.39	-0.17	7.5	2.332974
Aug. 27.37	244 0825.87060	5	W	2 36 24.125	-0.021	+ 2 58 36.51	+0.13	7.5	2.320495
Aug. 29.36	244 0827.86541	7	W	2 36 47.480	-0.006	+ 2 55 31.94	-0.49	7.5	2.295819
Aug. 30.36	244 0828.86279	4	W	2 36 57.141	-0.008	+ 2 53 51.80	+0.04	7.4	2.283630
Sept. 1.35	244 0830.85751	8	W	2 37 12.350	-0.048	+ 2 50 13.07	-0.31	7.4	2.259570
1970 Sept. 2.35	244 0831.85484	12	W	2 37 17.963	-0.001	+ 2 48 15.40	-0.41	7.4	2.247708
Sept. 3.35	244 0832.85216	11	W	2 37 22.152	+0.007	+ 2 46 12.84	+0.08	7.4	2.235963
Sept. 7.34	244 0836.84127	10	W	2 37 24.892	+0.020	+ 2 37 07.62	-0.25	7.4	2.190237
Sept. 8.33	244 0837.83851	7	W	2 37 22.025	+0.000	+ 2 34 38.72	-0.32	7.3	2.179140
Sept. 10.33	244 0839.83293	4	W	2 37 12.056	-0.006	+ 2 29 26.76	-0.30	7.3	2.157374
1970 Sept. 11.32	244 0840.83012	7	W	2 37 04.936	-0.002	+ 2 26 43.90	-0.24	7.3	2.146713
Sept. 15.31	244 0844.81870	11	W	2 36 22.091	+0.010	+ 2 15 09.01	+0.04	7.3	2.105638
Sept. 18.30	244 0847.80997	12	W	2 35 34.838	-0.025	+ 2 05 45.75	+0.28	7.2	2.076586
Sept. 19.30	244 0848.80702	8	W	2 35 16.265	+0.002	+ 2 02 29.53	-0.89	7.2	2.067257
Sept. 20.30	244 0849.80406	10	W	2 34 56.235	-0.001	+ 1 59 11.70	-0.33	7.2	2.058112
1970 Sept. 23.29	244 0852.79508	4	W	2 33 47.640	-0.015	+ 1 48 58.63	-0.14	7.2	2.031829
Sept. 24.29	244 0853.79205	7	W	2 33 22.010	+0.024	+ 1 45 29.02	+0.07	7.2	2.023467
Sept. 28.27	244 0857.77979	13	W	2 31 25.610	-0.000	+ 1 31 08.68	+0.09	7.1	1.992122
Sept. 29.27	244 0858.77668	8	W	2 30 53.192	+0.010	+ 1 27 28.93	-0.49	7.1	1.984834
Sept. 30.27	244 0859.77356	8	W	2 30 19.449	-0.016	+ 1 23 49.19	+0.04	7.1	1.977773
1970 Oct. 2.26	244 0861.76728	12	W	2 29 08.259	-0.012	+ 1 16 25.96	-0.42	7.1	1.964349
Oct. 3.26	244 0862.76412	8	W	2 28 30.859	+0.005	+ 1 12 44.77	+0.30	7.1	1.957993
Oct. 4.26	244 0863.76094	12	W	2 27 52.231	-0.033	+ 1 09 01.97	-0.63	7.1	1.951879
Oct. 5.25	244 0864.75775	8	W	2 27 12.536	-0.001	+ 1 05 20.79	-0.28	7.1	1.946011
Oct. 8.24	244 0867.74811	5	E	2 25 06.870	-0.008	+ 0 54 21.32	-0.13	7.1	1.929911
1970 Oct. 10.24	244 0869.74162	4	E	2 23 38.035	-0.050	+ 0 47 09.18	+0.43	7.0	1.920459
Oct. 11.23	244 0870.73837	7	E	2 22 52.284	-0.017	+ 0 43 35.22	-0.12	7.0	1.916125
Oct. 12.23	244 0871.73510	7	E	2 22 05.645	-0.004	+ 0 40 04.16	-0.11	7.0	1.912055
Oct. 14.22	244 0873.72853	11	E	2 20 29.885	-0.033	+ 0 33 10.78	+0.52	7.0	1.904714
Oct. 21.20	244 0880.70531	5	E	2 14 34.347	-0.004	+ 0 10 57.14	-0.37	7.0	1.887625

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Greenwich	Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1970	Oct. 22.20	244 0881.70198	7 E	2 13 41.614 +0.010	+ 0 08 06.13 +0.38	7.0	1.886299
	Oct. 24.19	244 0883.69529	5 E	2 11 55.159 -0.023	+ 0 02 39.34 +0.31	7.0	1.884496
	Oct. 29.17	244 0888.67853	11 E	2 07 26.407 -0.011	- 0 09 06.58 -0.01	7.0	1.884972
	Oct. 30.17	244 0889.67518	11 E	2 06 32.714 +0.032	- 0 11 05.56 +0.90	7.0	1.885923
	Nov. 1.16	244 0891.66849	10 E	2 04 45.712 -0.003	- 0 14 42.66 +0.35	7.0	1.888676
1970	Nov. 3.16	244 0893.66180	7 E	2 02 59.794 -0.023	- 0 17 47.35 -0.25	7.0	1.892558
	Nov. 4.15	244 0894.65847	4 E	2 02 07.389 -0.024	- 0 19 06.60 -0.10	7.0	1.894918
	Nov. 5.15	244 0895.65514	13 E	2 01 15.422 -0.024	- 0 20 17.18 +0.07	7.0	1.897555
	Nov. 6.15	244 0896.65181	7 E	2 00 23.960 -0.011	- 0 21 19.48 -0.29	7.0	1.900467
	Nov. 7.14	244 0897.64849	4 E	1 59 33.032 -0.008	- 0 22 12.55 -0.33	7.0	1.903651
1970	Nov. 8.14	244 0898.64518	13 E	1 58 42.697 -0.008	- 0 22 55.97 +0.23	7.0	1.907106
	Nov. 9.14	244 0899.64188	13 E	1 57 53.020 +0.003	- 0 23 31.17 -0.13	7.0	1.910828
	Nov. 12.13	244 0902.63202	8 E	1 55 28.299 -0.026	- 0 24 19.03 +0.74	7.0	1.923574
	Nov. 14.12	244 0904.62549	11 E	1 53 55.966 +0.005	- 0 24 04.32 +0.64	7.0	1.933358
	Nov. 15.12	244 0905.62224	10 E	1 53 11.142 +0.009	- 0 23 42.96 +0.22	7.0	1.938628
1970	Nov. 16.11	244 0906.61901	10 E	1 52 27.236 -0.023	- 0 23 12.11 -0.34	7.1	1.944145
	Nov. 17.11	244 0907.61578	14 E	1 51 44.328 -0.048	- 0 22 31.00 -0.30	7.1	1.949908
	Nov. 18.11	244 0908.61257	5 E	1 51 02.507 -0.014	- 0 21 39.92 +0.01	7.1	1.955913
	Nov. 19.10	244 0909.60937	4 E	1 50 21.721 -0.007	- 0 20 39.44 +0.01	7.1	1.962156
	Nov. 20.10	244 0910.60618	7 E	1 49 42.019 -0.014	- 0 19 28.48 +0.79	7.1	1.968635
1970	Nov. 21.10	244 0911.60300	5 E	1 49 03.476 +0.007	- 0 18 09.42 -0.07	7.1	1.975346
	Nov. 22.09	244 0912.59984	13 E	1 48 26.017 -0.052	- 0 16 39.82 -0.09	7.1	1.982285
	Nov. 23.09	244 0913.59669	13 E	1 47 49.886 +0.021	- 0 15 00.22 +0.17	7.1	1.989449
	Nov. 24.09	244 0914.59356	11 E	1 47 14.876 -0.011	- 0 13 11.77 -0.42	7.1	1.996834
	Nov. 26.08	244 0916.58733	8 E	1 46 08.709 -0.012	- 0 09 04.32 -0.07	7.1	2.012251
1970	Nov. 27.08	244 0917.58424	11 E	1 45 37.584 -0.002	- 0 06 45.56 +0.71	7.1	2.020275
	Nov. 29.07	244 0919.57811	10 E	1 44 39.315 -0.015	- 0 01 41.61 +0.01	7.1	2.036933
	Nov. 30.07	244 0920.57507	10 E	1 44 12.245 -0.005	+ 0 01 05.13 +0.22	7.2	2.045558
	Dec. 1.07	244 0921.57204	5 E	1 43 46.532 -0.027	+ 0 04 00.63 -0.19	7.2	2.054375
	Dec. 2.06	244 0922.56903	7 E	1 43 22.265 -0.005	+ 0 07 00.00	7.2	2.063378
1970	Dec. 3.06	244 0923.56603	5 E	1 42 59.403 +0.010	+ 0 10 20.47 +0.18	7.2	2.072562
	Dec. 4.06	244 0924.56306	7 E	1 42 37.917 -0.024	+ 0 13 43.70 +0.06	7.2	2.081924
	Dec. 5.05	244 0925.56009	5 E	1 42 17.912 -0.010	+ 0 17 16.21 +0.31	7.2	2.091457
	Dec. 7.05	244 0927.55422	5 E	1 41 42.239 +0.025	+ 0 24 46.32 -0.32	7.2	2.111022
	Dec. 9.04	244 0929.54842	8 E	1 41 12.301 -0.013	+ 0 32 51.33 -0.19	7.2	2.131219
1970	Dec. 11.04	244 0931.54268	12 E	1 40 48.239 -0.006	+ 0 41 29.46 -0.07	7.3	2.152012
	Dec. 12.03	244 0932.53983	8 E	1 40 38.403 +0.007	+ 0 46 00.24 -0.40	7.3	2.162621
	Dec. 14.03	244 0934.53419	13 E	1 40 23.014 -0.039	+ 0 55 25.95 -0.40	7.3	2.184244
	Dec. 15.03	244 0935.53140	4 E	1 40 17.542 -0.009	+ 1 00 20.69 -0.01	7.3	2.195250
	Dec. 17.02	244 0937.52586	7 E	1 40 10.868 +0.006	+ 1 10 31.29 -0.40	7.3	2.217631
1970	Dec. 18.02	244 0938.52312	7 E	1 40 09.657 -0.009	+ 1 15 48.55 +0.48	7.3	2.228997
	Dec. 19.01	244 0939.52039	5 E	1 40 09.869 -0.027	+ 1 21 11.31 -0.22	7.3	2.240477
	Dec. 20.01	244 0940.51768	7 E	1 40 11.538 -0.010	+ 1 26 41.46 -0.51	7.4	2.252064
	Dec. 21.01	244 0941.51498	10 E	1 40 14.611 -0.006	+ 1 32 19.09 -0.17	7.4	2.263756
	Dec. 24.00	244 0944.50700	12 E	1 40 32.284 +0.018	+ 1 49 51.19 +0.17	7.4	2.299417
1970	Dec. 25.00	244 0945.50437	13 E	1 40 40.915 -0.026	+ 1 55 54.65 +0.13	7.4	2.311486
	Dec. 26.00	244 0946.50175	10 E	1 40 50.977 -0.022	+ 2 02 04.79 +0.52	7.4	2.323639
1971	Dec. 11.38	244 1296.88306	15 E	9 51 19.784 -0.056	+22 44 13.23 +0.39	6.9	1.984742
	Dec. 14.37	244 1299.87573	7 E	9 52 34.744 -0.001	+22 56 57.56 +0.40	6.8	1.949462
	Dec. 15.37	244 1300.87326	11 E	9 52 56.568 -0.016	+23 01 31.61 +0.03	6.8	1.937921
1971	Dec. 16.37	244 1301.87076	4 E	9 53 16.829 -0.003	+23 06 15.80 -0.06	6.8	1.926497
	Dec. 17.36	244 1302.86824	7 E	9 53 35.445 -0.019	+23 11 10.12 +0.14	6.8	1.915194
	Dec. 18.36	244 1303.86571	11 E	9 53 52.435 -0.033	+23 16 00.00	6.8	1.904016
	Dec. 19.36	244 1304.86316	7 E	9 54 07.798 -0.028	+23 21 27.53 -0.08	6.8	1.892967
	Dec. 20.36	244 1305.86058	7 E	9 54 21.534 +0.009	+23 26 51.45 +0.43	6.8	1.882052
1971	Dec. 23.35	244 1308.85275	12 E	9 54 52.505 +0.009	+23 43 59.06 +0.38	6.7	1.850150
	Dec. 24.34	244 1309.85010	8 W	9 54 59.412 +0.001	+23 49 59.97 -0.01	6.7	1.839811
	Dec. 25.34	244 1310.84743	14 W	9 55 04.604 -0.002	+23 56 09.83 -0.58	6.7	1.829627
	Dec. 26.34	244 1311.84474	13 W	9 55 08.102 +0.023	+24 02 29.43 -0.39	6.7	1.819601
	Dec. 28.33	244 1313.83930	7 W	9 55 09.822 +0.003	+24 15 34.79 -0.11	6.7	1.800038
1971	Dec. 29.33	244 1314.83655	4 W	9 55 08.079 +0.002	+24 22 20.79 +0.58	6.6	1.790509
1972	Jan. 8.30	244 1324.80792	12 W	9 53 13.553 -0.009	+25 36 49.28 -0.13	6.5	1.705387
	Jan. 9.30	244 1325.80495	14 W	9 52 52.388 -0.008	+25 44 51.61 +0.12	6.5	1.697979
	Jan. 11.29	244 1327.79894	7 W	9 52 04.876 +0.007	+26 01 10.01 -0.00	6.5	1.683819
	Jan. 12.29	244 1328.79590	11 W	9 51 38.544 +0.006	+26 09 25.98 +0.40	6.5	1.677075
1972	Jan. 13.29	244 1329.79285	4 W	9 51 10.486 -0.030	+26 17 44.47 -0.28	6.5	1.670560
	Jan. 14.28	244 1330.78978	7 W	9 50 40.853 +0.013	+26 26 06.98 -0.02	6.5	1.664278
	Jan. 16.28	244 1332.78357	7 W	9 49 36.560 -0.026	+26 42 58.55 -0.27	6.5	1.652426
	Jan. 17.27	244 1333.78044	7 W	9 49 02.112 +0.028	+26 51 26.34 -0.97	6.5	1.646864
	Jan. 19.27	244 1335.77413	15 W	9 47 48.507 +0.030	+27 08 26.31 -0.33	6.4	1.636482
1972	Jan. 21.26	244 1337.76776	15 W	9 46 29.005 -0.016	+27 25 25.17 -0.02	6.4	1.627111
	Jan. 22.26	244 1338.76454	13 W	9 45 47.229 +0.003	+27 33 52.73 +0.03	6.4	1.622810
	Jan. 23.26	244 1339.76132	12 W	9 45 04.099 -0.013	+27 42 17.65 -0.59	6.4	1.618769
	Jan. 25.25	244 1341.75482	4 W	9 43 34.128 -0.031	+27 59 00.74 -0.39	6.4	1.611472
	Jan. 26.25	244 1342.75155	11 W	9 42 47.436 +0.004	+28 07 17.51 +0.16	6.4	1.608220

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Greenwich Date	Julian Date	Ob	C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1972 Jan. 27.24	244 1343.74826	7	W	9 41 59.586 -0.016	+28 15 28.69 -0.65	6.4	1.605234
Jan. 29.24	244 1345.74166	7	W	9 40 20.887 -0.002	+28 31 38.54 +0.07	6.4	1.600064
Jan. 30.23	244 1346.73835	13	W	9 39 30.128 +0.007	+28 39 35.09 +0.57	6.4	1.597883
Feb. 2.22	244 1349.72834	15	W	9 36 52.929 +0.000	+29 02 41.74 -0.36	6.4	1.592966
Feb. 3.22	244 1350.72499	12	W	9 35 59.112 -0.015	+29 11 -0.64	6.4	1.591871
1972 Feb. 4.22	244 1351.72163	8	W	9 35 04.765 +0.013	+29 17 27.83 -0.24	6.4	1.591050
Feb. 5.21	244 1352.71827	15	W	9 34 09.877 +0.012	+29 24 37.53 -0.26	6.4	1.590503
Feb. 6.21	244 1353.71490	8	W	9 33 14.538 -0.007	+29 31 37.40 -0.62	6.4	1.590230
Feb. 10.20	244 1357.70139	11	W	9 29 30.510 -0.025	+29 57 55.28 +0.32	6.4	1.591877
Feb. 11.19	244 1358.69801	7	W	9 28 34.266 +0.011	+30 04 00.94 -0.17	6.4	1.592971
1972 Feb. 13.19	244 1360.69125	11	W	9 26 41.875 -0.030	+30 15 37.68 +0.66	6.4	1.595974
Feb. 15.18	244 1362.68451	8	W	9 24 50.412 -0.002	+30 26 21.58 -0.63	6.4	1.600053
Feb. 17.17	244 1364.67778	13	W	9 23 00.406 -0.027	+30 36 -0.64	6.4	1.605194
Feb. 18.17	244 1365.67442	15	W	9 22 06.206 -0.020	+30 41 -0.64	6.4	1.608157
Feb. 24.15	244 1371.65447	7	W	9 16 56.731 -0.032	+31 03 26.02 -0.84	6.4	1.631255
1972 Feb. 27.14	244 1374.64464	13	W	9 14 35.227 -0.015	+31 11 32.04 -0.63	6.4	1.646077
Feb. 28.14	244 1375.64139	7	W	9 13 50.429 +0.005	+31 13 46.43 +0.29	6.5	1.651480
Feb. 29.13	244 1376.63816	8	W	9 13 06.855 -0.011	+31 15 44.87 -0.61	6.5	1.657108
Mar. 1.13	244 1377.63494	15	W	9 12 24.613 -0.013	+31 17 30.72 -0.04	6.5	1.662959
Mar. 2.13	244 1378.63174	12	W	9 11 43.739 -0.013	+31 19 02.07 -0.02	6.5	1.669028
1972 Mar. 3.12	244 1379.62856	8	W	9 11 04.295 +0.002	+31 20 19.69 +0.14	6.5	1.675312
Mar. 4.12	244 1380.62539	15	W	9 10 26.276 -0.008	+31 21 23.07 -0.20	6.5	1.681807
Mar. 5.12	244 1381.62223	13	W	9 09 49.739 -0.032	+31 22 13.27 -0.10	6.5	1.688511
Mar. 6.11	244 1382.61910	13	W	9 09 14.794 -0.008	+31 22 50.04 +0.04	6.5	1.695418
Mar. 8.11	244 1384.61289	7	W	9 08 09.627 +0.013	+31 23 23.24 -0.26	6.5	1.709831
1972 Mar. 9.10	244 1385.60981	4	W	9 07 39.450 -0.006	+31 23 20.58 -0.13	6.5	1.717329
Mar. 10.10	244 1386.60675	11	W	9 07 10.955 -0.012	+31 23 -0.13	6.5	1.725016
Mar. 15.09	244 1391.59175	12	W	9 05 14.319 -0.040	+31 18 41.89 +0.18	6.6	1.766153
Mar. 16.08	244 1392.58881	8	W	9 04 56.349 -0.006	+31 17 13.68 +0.40	6.6	1.774892
Mar. 17.08	244 1393.58590	15	W	9 04 40.120 -0.033	+31 15 33.13 -0.26	6.6	1.783791
1972 Mar. 18.08	244 1394.58300	12	W	9 04 25.759 -0.020	+31 13 41.77 -0.50	6.6	1.792845
Mar. 19.07	244 1395.58012	13	W	9 04 13.144 -0.078	+31 11 40.36 +0.19	6.6	1.802051
Mar. 20.07	244 1396.57727	13	W	9 04 02.476 -0.039	+31 09 26.96 -0.38	6.7	1.811403
Mar. 22.07	244 1398.57163	4	W	9 03 46.568 -0.017	+31 04 30.73 +0.26	6.7	1.830531
Mar. 23.06	244 1399.56883	11	W	9 03 41.295 -0.053	+31 01 47.19 +0.25	6.7	1.840297
1972 Mar. 25.06	244 1401.56332	4	W	9 03 36.307 -0.015	+30 55 49.50 -1.34	6.7	1.860214
Mar. 26.06	244 1402.56059	14	W	9 03 36.511 +0.006	+30 52 38.86 +0.14	6.7	1.870357
Mar. 27.05	244 1403.55788	11	W	9 03 38.446 -0.016	+30 49 17.71 +0.18	6.7	1.880617
Mar. 28.05	244 1404.55519	12	W	9 03 42.121 -0.064	+30 46 -0.67	6.7	1.890992
Mar. 29.05	244 1405.55253	12	W	9 03 47.647 -0.032	+30 42 08.48 -0.20	6.8	1.901478
1972 Mar. 30.04	244 1406.54988	8	W	9 03 54.884 -0.028	+30 38 21.27 -0.15	6.8	1.912071
Apr. 1.04	244 1408.54464	12	W	9 04 14.524 -0.030	+30 30 -0.68	6.8	1.933564
Apr. 3.03	244 1410.53949	13	W	9 04 04.927 -0.062	+30 21 50.82 -0.28	6.8	1.955445
Apr. 5.03	244 1412.53441	11	W	9 05 14.071 -0.028	+30 12 49.26 -0.38	6.8	1.977688
Apr. 6.03	244 1413.53190	7	W	9 05 33.101 -0.006	+30 08 08.69 +0.80	6.9	1.988938
1972 Apr. 7.02	244 1414.52941	4	W	9 05 53.696 -0.024	+30 03 19.33 +0.34	6.9	2.000269
Apr. 9.02	244 1416.52448	7	W	9 06 39.701 -0.007	+29 53 20.14 -0.19	6.9	2.023161
Apr. 10.02	244 1417.52204	7	W	9 07 05.018 -0.017	+29 48 10.90 +0.06	6.9	2.034717
Apr. 12.01	244 1419.51722	15	W	9 08 00.259 -0.014	+29 37 31.73 -0.36	6.9	2.058030
Apr. 13.01	244 1420.51483	12	W	9 08 30.087 -0.051	+29 32 02.63 -0.42	6.9	2.069781
1972 Apr. 15.00	244 1422.51011	15	E	9 09 34.261 -0.041	+29 20 46.26 +0.03	7.0	2.093457
Apr. 16.00	244 1423.50777	13	E	9 10 08.496 -0.050	+29 14 58.89 +0.18	7.0	2.105374
Apr. 17.00	244 1424.50546	13	E	9 10 44.144 -0.060	+29 09 05.34 +0.05	7.0	2.117340
Apr. 18.00	244 1425.50315	11	E	9 11 21.209 -0.042	+29 03 05.71 -0.42	7.0	2.129352
Apr. 22.99	244 1430.49187	4	E	9 14 46.299 -0.009	+28 31 47.38 -0.73	7.1	2.189992
1972 Apr. 25.98	244 1433.48527	12	E	9 17 04.201 -0.072	+28 11 59.01 -0.10	7.1	2.226748
Apr. 26.98	244 1434.48310	8	E	9 17 52.623 +0.002	+28 05 12.45 -0.47	7.1	2.239049
Apr. 27.98	244 1435.48094	15	E	9 18 42.070 -0.019	+27 58 22.07 +0.17	7.1	2.251370
Apr. 28.97	244 1436.47879	12	E	9 19 32.639 -0.034	+27 51 25.88 -0.26	7.1	2.263710
Apr. 29.97	244 1437.47666	13	E	9 20 24.335 -0.015	+27 44 25.35 -0.35	7.2	2.276067
1972 Apr. 30.97	244 1438.47454	13	E	9 21 17.094 -0.001	+27 37 20.70 +0.06	7.2	2.288438
May 1.97	244 1439.47243	7	E	9 22 10.834 -0.046	+27 30 12.12 +1.10	7.2	2.300822
May 2.96	244 1440.47033	4	E	9 23 05.663 -0.035	+27 22 57.21 +0.29	7.2	2.313218
May 3.96	244 1441.46824	11	E	9 24 01.466 -0.048	+27 15 38.64 +0.26	7.2	2.325622
May 4.96	244 1442.46617	7	E	9 24 58.278 -0.040	+27 08 15.48 +0.05	7.2	2.338034
1972 May 12.94	244 1450.44995	8	E	9 33 05.872 -0.018	+26 06 38.16 +0.09	7.3	2.437370
May 13.94	244 1451.44797	15	E	9 34 10.694 -0.032	+25 58 37.89 +0.68	7.3	2.449762
May 17.93	244 1455.44013	7	E	9 38 37.877 -0.042	+25 25 55.23 +0.54	7.4	2.499182
May 18.93	244 1456.43819	4	E	9 39 46.527 -0.046	+25 17 34.98 +0.40	7.4	2.511491
May 21.93	244 1459.43243	13	E	9 43 16.653 -0.035	+24 52 12.25 +0.02	7.4	2.548283
1973 Mar. 19.41	244 1760.91146	12	E	17 01 40.926 -0.024	-17 19 22.40 +0.57	7.3	2.332090
Mar. 21.40	244 1762.90679	11	E	17 02 48.774 -0.025	-17 22 29.54 +0.10	7.3	2.307331
Mar. 22.40	244 1763.90442	7	E	17 03 20.712 -0.014	-17 24 01.36 -0.21	7.3	2.295021
Mar. 23.40	244 1764.90205	4	E	17 03 51.300 +0.001	-17 25 32.11 -0.56	7.3	2.282762
Mar. 24.39	244 1765.89965	11	E	17 04 20.492 -0.006	-17 27 01.32 -0.41	7.3	2.270557

1 CERES

Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1973 Mar. 27.39	244 1768.89238	8 E	17 05 39.663 -0.008	-17 31 23.32 +0.18	7.3	2.234297
Mar. 28.38	244 1769.88992	15 E	17 06 03.172 -0.020	-17 32 49.45 -0.04	7.2	2.222340
Apr. 6.36	244 1778.86701	11 E	17 08 27.177 +0.003	-17 45 19.12 -0.24	7.2	2.118377
Apr. 7.36	244 1779.86437	7 E	17 08 35.391 -0.032	-17 46 41.15 -0.39	7.1	2.107304
Apr. 9.35	244 1781.85904	11 E	17 08 47.149 -0.014	-17 49 24.31 +0.16	7.1	2.085495
1973 Apr. 11.35	244 1783.85365	8 E	17 08 52.482 -0.018	-17 52 08.13 +0.33	7.1	2.064158
Apr. 12.35	244 1784.85092	12 E	17 08 52.726 -0.025	-17 53 31.06 -0.41	7.1	2.053677
Apr. 13.34	244 1785.84817	8 E	17 08 51.359 -0.029	-17 54 52.39 +0.63	7.1	2.043324
Apr. 16.33	244 1788.83982	4 E	17 08 37.574 +0.001	-17 59 01.50 -0.01	7.0	2.013080
Apr. 17.33	244 1789.83700	11 E	17 08 29.709 -0.010	-18 00 24.65 +0.23	7.0	2.003282
1973 Apr. 18.33	244 1790.83416	4 E	17 08 20.249 +0.009	-18 01 48.54 +0.08	7.0	1.993632
Apr. 19.33	244 1791.83130	11 E	17 08 09.101 -0.031	-18 03 11.80 +0.95	7.0	1.984134
Apr. 24.31	244 1796.81673	8 E	17 06 49.189 -0.022	-18 10 19.93 +0.23	7.0	1.939058
Apr. 26.31	244 1798.81077	8 E	17 06 05.932 +0.003	-18 13 14.21 +0.40	7.0	1.922232
Apr. 28.30	244 1800.80473	8 E	17 05 16.258 -0.009	-18 16 11.08 +0.09	6.9	1.906144
1973 Apr. 29.30	244 1801.80169	8 E	17 04 49.051 -0.025	-18 17 40.38 -0.12	6.9	1.898389
May 1.29	244 1803.79555	4 E	17 03 50.065 -0.005	-18 20 00.00 -0.00	6.9	1.883475
May 3.28	244 1805.78934	4 E	17 02 45.026 -0.019	-18 23 42.09 -0.02	6.9	1.869386
May 4.28	244 1806.78620	11 E	17 02 10.334 -0.008	-18 25 13.69 +0.25	6.9	1.862662
May 5.28	244 1807.78306	11 E	17 01 34.212 -0.003	-18 26 47.13 -0.75	6.9	1.856157
1973 May 6.27	244 1808.77989	7 E	17 00 56.657 -0.038	-18 28 19.21 +0.20	6.9	1.849873
May 12.26	244 1814.76060	15 E	16 56 44.231 -0.039	-18 37 48.76 -0.25	6.8	1.817027
May 13.25	244 1815.75733	12 E	16 55 58.005 -0.009	-18 39 24.96 -0.02	6.8	1.812389
May 14.25	244 1816.75406	8 E	16 55 10.640 -0.031	-18 41 01.80 -0.03	6.8	1.807997
May 24.22	244 1826.72072	12 E	16 46 28.022 -0.014	-18 57 30.45 -0.88	6.8	1.778147
1973 May 25.21	244 1827.71734	8 E	16 45 31.959 -0.014	-18 59 10.61 -0.57	6.8	1.776616
May 29.20	244 1831.70379	11 E	16 41 43.672 -0.006	-19 05 54.78 -0.11	6.8	1.773221
May 31.19	244 1833.69699	7 E	16 39 47.989 -0.017	-19 09 19.22 -0.38	6.8	1.773179
June 1.19	244 1834.69359	11 E	16 38 49.995 -0.027	-19 11 01.36 +0.14	6.8	1.773574
June 2.18	244 1835.69019	7 E	16 37 51.993 -0.034	-19 12 00.00 -0.00	6.8	1.774247
1973 June 5.17	244 1838.68000	8 E	16 34 58.621 -0.006	-19 17 56.58 -0.04	6.8	1.777932
June 10.16	244 1843.66308	16 E	16 30 15.365 -0.042	-19 26 46.93 -0.09	6.8	1.789565
June 12.15	244 1845.65635	11 E	16 28 25.565 -0.009	-19 30 23.51 -0.08	6.8	1.796107
June 21.12	244 1854.62651	8 E	16 20 49.674 -0.044	-19 47 22.73 +0.30	6.9	1.838398

2 PALLAS

Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1968 Jan. 20.35	243 9875.85578	5 W	11 49 34.132 +0.025	-13 37 02.04 +0.67	7.1	1.568046
Jan. 24.34	243 9879.84584	2 W	11 50 59.188 +0.002	-13 02 04.59 +0.01	7.1	1.527400
Feb. 3.31	243 9889.81961	6 W	11 52 32.174 +0.035	-11 05 23.93 +0.61	7.0	1.433974
Feb. 14.28	243 9900.78849	5 W	11 50 57.667 +0.026	- 8 06 16.80 +0.07	6.8	1.350139
Feb. 15.28	243 9901.78555	5 W	11 50 39.401 +0.028	- 7 47 23.04 +0.59	6.8	1.343747
1968 Feb. 16.28	243 9902.78259	6 W	11 50 19.619 +0.035	- 7 28 05.29 +0.19	6.8	1.337584
Feb. 17.27	243 9903.77961	5 W	11 49 58.355 +0.049	- 7 08 22.76 +0.09	6.8	1.331655
Feb. 20.27	243 9906.77058	6 W	11 48 45.867 +0.007	- 6 06 53.05 +0.01	6.8	1.315326
Feb. 28.24	243 9914.74587	4 W	11 44 36.801 +0.037	- 3 07 30.82 +0.71	6.8	1.283441
Feb. 29.24	243 9915.74272	5 W	11 44 00.878 +0.056	- 2 43 47.44 +0.29	6.8	1.280738
1968 Mar. 9.21	243 9924.71406	6 W	11 38 06.782 +0.025	+ 0 57 39.59 +0.43	6.8	1.270192
Mar. 13.20	243 9928.70122	2 W	11 35 20.315 +0.055	+ 2 37 55.80 +0.27	6.8	1.273694
Mar. 19.18	243 9934.68198	6 W	11 31 13.271 +0.039	+ 5 06 09.85 -0.26	6.8	1.288461
Mar. 21.17	243 9936.67560	4 W	11 29 53.794 +0.009	+ 5 54 19.33 +0.43	6.8	1.295892
Mar. 22.17	243 9937.67243	6 W	11 29 14.962 +0.066	+ 6 18 04.00 +0.39	6.8	1.300071
1968 Mar. 23.16	243 9938.66925	6 W	11 28 36.656 +0.008	+ 6 41 34.31 +0.60	6.8	1.304556
Mar. 27.15	243 9942.65665	5 W	11 26 11.345 +0.030	+ 8 12 47.63 +0.72	6.9	1.325502
Mar. 30.14	243 9945.64732	2 W	11 24 32.030 +0.018	+ 9 17 50.19 +0.35	6.9	1.344273
Apr. 2.13	243 9948.63809	6 W	11 23 02.652 +0.022	+10 19 36.23 +0.33	7.0	1.365543
Apr. 5.12	243 9951.62900	4 W	11 21 44.379 +0.030	+11 17 49.18 -0.00	7.0	1.389181
1968 Apr. 6.12	243 9952.62600	4 W	11 21 20.918 +0.028	+11 36 24.29 +0.01	7.0	1.397563
Apr. 9.11	243 9955.61709	5 W	11 20 18.828 +0.020	+12 29 37.98 +0.48	7.1	1.424142
Apr. 12.10	243 9958.60833	5 W	11 19 29.611 +0.008	+13 18 59.43 +0.24	7.1	1.452755
Apr. 18.09	243 9964.59128	4 W	11 18 31.401 +0.039	+14 46 04.47 +0.67	7.2	1.515528
Apr. 20.08	243 9966.58573	4 W	11 18 24.091 +0.015	+15 11 40.34 -0.22	7.2	1.537953
1968 Apr. 25.07	243 9971.57218	2 W	11 18 32.608 +0.002	+16 08 27.34 +0.39	7.3	1.596929
Apr. 27.06	243 9973.56688	2 W	11 18 46.743 +0.035	+16 28 20.37 +0.29	7.4	1.621582
Apr. 30.05	243 9976.55906	6 W	11 19 19.207 +0.020	+16 55 15.75 +0.43	7.4	1.659576
May 6.04	243 9982.54389	5 W	11 21 03.791 +0.001	+17 39 12.44 +0.80	7.5	1.738742
May 11.03	243 9987.53169	2 W	11 23 09.245 +0.020	+18 06 31.43 +0.29	7.6	1.807375
1968 May 16.01	243 9992.51985	6 W	11 25 46.919 -0.005	+18 26 13.24 -0.28	7.7	1.877916
May 21.00	243 9997.50837	7 W	11 28 54.484 +0.027	+18 39 02.87 +0.46	7.8	1.949970
June 4.97	244 0012.47572	7 W	11 40 54.574 +0.032	+18 42 29.97 +0.10	8.1	2.171419
June 7.96	244 0015.46948	7 W	11 43 43.188 +0.013	+18 37 53.63 +0.15	8.1	2.216072
June 18.94	244 0026.44724	7 W	11 54 58.847 +0.021	+18 09 00.68 +0.73	8.3	2.379242
1969 Apr. 6.42	244 0317.92772	10 E	18 36 02.987 -0.005	+14 56 35.08 +0.03	9.3	2.914153
Apr. 21.38	244 0332.88996	7 E	18 40 40.287 +0.017	+17 41 09.32 -0.36	9.2	2.782658
May 12.33	244 0353.83151	4 E	18 39 04.087 +0.011	+21 13 13.04 +0.23	9.1	2.627242
May 25.29	244 0366.79207	9 E	18 33 22.109 +0.042	+22 55 41.18 -0.38	9.0	2.556806
May 27.28	244 0368.78580	10 E	18 32 12.267 -0.036	+23 08 29.52 -0.09	9.0	2.548166
1969 June 2.26	244 0374.76674	10 E	18 28 19.597 -0.000	+23 41 18.31 -0.87	9.0	2.526093
June 29.17	244 0401.67795	9 E	18 06 34.717 +0.045	+24 06 46.45 +0.27	9.0	2.506401
June 30.17	244 0402.67465	9 E	18 05 44.999 +0.072	+24 03 37.85 +1.30	9.0	2.508335
July 2.16	244 0404.66805	6 E	18 04 06.411 -0.001	+23 56 25.61 -0.27	9.0	2.512783
July 5.15	244 0407.65819	4 E	18 01 41.723 +0.009	+23 43 33.95 +0.19	9.1	2.520899
1969 July 6.15	244 0408.65491	9 E	18 00 54.516 +0.053	+23 38 41.30 -2.14	9.1	2.523989
July 12.13	244 0414.63541	10 E	17 56 23.971 -0.006	+23 04 09.78 +0.46	9.1	2.546541
July 14.12	244 0416.62897	8 E	17 54 59.694 +0.018	+22 50 36.57 -0.62	9.1	2.555570
July 16.12	244 0418.62258	6 E	17 53 38.790 +0.039	+22 36 07.47 -1.01	9.1	2.565341
July 20.10	244 0422.60992	10 E	17 51 07.967 -0.014	+22 04 31.36 -0.57	9.1	2.587067
1969 July 23.10	244 0425.60054	10 E	17 49 25.471 +0.027	+21 38 41.17 -0.32	9.1	2.605223
July 28.08	244 0430.58517	10 E	17 46 56.261 -0.024	+20 52 02.05 -0.51	9.2	2.638879
Aug. 1.07	244 0434.57311	5 E	17 45 17.493 -0.003	+20 11 55.20 -0.58	9.2	2.668726
Aug. 12.04	244 0445.54108	5 E	17 42 25.320 +0.002	+18 11 56.69 -0.59	9.3	2.763173
Aug. 17.02	244 0450.52710	9 E	17 41 56.744 +0.015	+17 14 13.17 +0.02	9.3	2.811511
1969 Aug. 20.01	244 0453.51889	10 E	17 41 54.472 -0.043	+16 39 02.12 -0.23	9.3	2.841942
Aug. 24.00	244 0457.50813	9 E	17 42 08.754 -0.002	+15 51 46.87 -0.15	9.4	2.884030
Aug. 25.00	244 0458.50547	9 E	17 42 15.329 +0.002	+15 39 55.66 -0.59	9.4	2.894804
Sept. 3.97	244 0468.47966	8 E	17 44 24.811 +0.004	+13 41 50.93 -0.69	9.5	3.007439
Sept. 7.96	244 0472.46970	8 E	17 45 47.911 -0.030	+12 55 16.66 -1.16	9.5	3.054647
1969 Sept. 10.96	244 0475.46236	10 E	17 47 01.386 -0.114	+12 20 48.70 -0.21	9.5	3.090709
1970 June 10.41	244 0747.91261	10 W	22 29 32.422 +0.030	+11 32 48.96 -0.75	9.6	3.127983
June 13.40	244 0750.90505	10 W	22 30 26.647 -0.100	+11 41 06.34 +0.16	9.5	3.084126
June 24.37	244 0761.87644	10 W	22 32 30.293 -0.028	+12 02 30.13 +1.14	9.4	2.925574
July 8.33	244 0775.83789	8 W	22 32 02.207 +0.089	+12 04 35.37 +1.35	9.3	2.734680
1970 July 10.33	244 0777.83218	11 W	22 31 40.403 +0.032	+12 02 07.44 +0.35	9.3	2.709002
July 11.32	244 0778.82930	8 W	22 31 27.817 -0.018	+12 00 36.88 +0.18	9.2	2.696350
July 12.32	244 0779.82641	9 W	22 31 14.190 -0.007	+11 58 54.79 -0.06	9.2	2.683827
July 26.28	244 0793.78468	8 W	22 26 10.631 +0.000	+11 13 42.54 -0.51	9.1	2.524546
July 31.26	244 0798.76923	7 W	22 23 34.206 +0.008	+10 47 12.45 -0.56	9.1	2.476298
1970 Aug. 1.26	244 0799.76610	7 W	22 23 00.162 -0.021	+10 41 13.57 -0.35	9.0	2.467286
Aug. 3.25	244 0801.75983	7 W	22 21 49.607 -0.001	+10 28 34.49 -0.02	9.0	2.449938
Aug. 4.25	244 0802.75668	11 W	22 21 13.098 -0.002	+10 21 54.23 +0.02	9.0	2.441610
Aug. 5.25	244 0803.75352	8 W	22 20 35.854 +0.039	+10 15 00.27 +0.05	9.0	2.433519
Aug. 9.24	244 0807.74079	13 W	22 17 59.518 -0.013	+ 9 45 08.43 -0.62	9.0	2.403593

2 PALLAS

Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1970 Aug. 17.21	244 0815.71502	9 W	22 12 19.615	-0.016	+ 8 35 02.61	-0.22 8.9 2.356166
Aug. 22.19	244 0820.69878	8 W	22 08 35.156	+0.034	+ 7 44 44.93	+0.24 8.9 2.335458
Aug. 23.19	244 0821.69552	10 W	22 07 49.648	+0.007	+ 7 34 08.67	+0.16 8.9 2.332177
Aug. 24.19	244 0822.69227	10 W	22 07 04.075	+0.013	+ 7 23 21.66	-0.50 8.9 2.329187
Aug. 25.18	244 0823.68901	7 W	22 06 18.417	-0.011	+ 7 12 25.76	-0.20 8.9 2.326492
1970 Aug. 26.18	244 0824.68575	5 W	22 05 32.797	+0.016	+ 7 01 19.71	-0.53 8.9 2.324092
Aug. 27.18	244 0825.68250	5 W	22 04 47.168	+0.006	+ 6 50 04.50	-0.86 8.9 2.321989
Aug. 29.17	244 0827.67599	5 W	22 03 16.177	-0.008	+ 6 27 09.28	-0.36 8.9 2.318683
Sept. 6.14	244 0835.65006	10 W	21 57 22.219	-0.009	+ 4 50 42.66	-0.24 8.9 2.317516
Sept. 7.14	244 0836.64684	13 W	21 56 39.815	-0.011	+ 4 38 15.13	-0.01 8.9 2.318726
1970 Sept. 8.14	244 0837.64362	5 W	21 55 57.986	+0.012	+ 4 25 43.17	-0.33 8.9 2.320233
Sept. 10.13	244 0839.63722	7 W	21 54 36.094	+0.029	+ 4 00 30.00	-0.53 8.9 2.324138
Sept. 14.12	244 0843.62450	13 W	21 52 00.404	+0.007	+ 3 09 38.34	-0.18 8.9 2.335451
Sept. 15.12	244 0844.62134	8 W	21 51 23.346	-0.018	+ 2 56 52.67	-0.07 8.9 2.338996
Sept. 18.11	244 0847.61193	8 W	21 49 37.266	-0.025	+ 2 18 36.28	+0.35 8.9 2.351319
1970 Sept. 19.10	244 0848.60881	12 W	21 49 03.710	+0.002	+ 2 05 52.05	+0.13 8.9 2.355981
Sept. 20.10	244 0849.60570	11 W	21 48 31.067	+0.009	+ 1 53 09.28	-0.13 8.9 2.360916
Sept. 21.10	244 0850.60260	10 W	21 47 59.376	+0.008	+ 1 40 29.01	+0.22 8.9 2.366122
Sept. 22.09	244 0851.59952	10 W	21 47 28.673	+0.011	+ 1 27 49.84	-0.63 8.9 2.371594
Sept. 24.09	244 0853.59339	5 W	21 46 30.314	+0.009	+ 1 02 42.26	-0.07 8.9 2.383330
1970 Sept. 25.08	244 0854.59034	4 W	21 46 02.695	-0.004	+ 0 50 13.08	-0.23 8.9 2.389587
Sept. 30.07	244 0859.57528	13 W	21 44 01.199	-0.046	- 0 11 05.76	+0.37 9.0 2.424609
Oct. 2.06	244 0861.56935	8 W	21 43 20.741	-0.016	- 0 35 00.68	-0.16 9.0 2.440287
Oct. 3.06	244 0862.56641	8 W	21 43 02.324	+0.012	- 0 46 48.19	+0.19 9.0 2.448466
Oct. 4.06	244 0863.56348	10 W	21 42 45.099	+0.014	- 0 58 30.37	-0.77 9.0 2.456866
1970 Oct. 5.06	244 0864.56057	10 W	21 42 29.064	-0.022	- 1 10 03.97	-0.05 9.0 2.465482
Oct. 17.02	244 0876.52671	10 E	21 40 54.662	+0.022	- 3 18 36.95	-0.37 9.1 2.583902
Oct. 18.02	244 0877.52399	10 E	21 40 54.943	+0.002	- 3 28 22.94	-0.51 9.1 2.594878
Oct. 24.00	244 0883.50793	7 E	21 41 22.949	+0.013	- 4 23 38.46	-0.44 9.1 2.663700
Oct. 29.99	244 0889.49238	8 E	21 42 35.124	+0.009	- 5 13 00.10	-0.58 9.2 2.736879
1970 Oct. 31.98	244 0891.48730	10 E	21 43 08.792	+0.008	- 5 28 06.18	-0.15 9.2 2.762059
1971 Aug. 17.45	244 1180.95408	8 W	3 56 32.969	+0.019	- 4 52 57.06	+0.23 8.4 2.405151
Aug. 22.44	244 1185.94459	8 W	4 02 33.102	-0.016	- 5 48 59.41	-0.00 8.4 2.337316
Aug. 23.44	244 1186.94267	8 W	4 03 43.091	+0.029	- 6 00 49.18	+0.02 8.4 2.323901
Aug. 24.44	244 1187.94073	7 W	4 04 52.296	+0.024	- 6 12 51.11	+0.33 8.3 2.310543
1971 Aug. 25.43	244 1188.93879	7 W	4 06 00.734	+0.002	- 6 25 06.18	-0.02 8.3 2.297244
Aug. 26.43	244 1189.93685	14 W	4 07 08.431	+0.003	- 6 37 33.92	-0.62 8.3 2.284006
Aug. 28.43	244 1191.93292	11 W	4 09 21.481	+0.016	- 7 03 04.96	-0.19 8.3 2.257725
Aug. 29.43	244 1192.93094	7 W	4 10 26.769	-0.005	- 7 16 09.00	+0.06 8.3 2.244686
Aug. 31.42	244 1194.92696	8 W	4 12 34.905	+0.017	- 7 42 53.58	+0.96 8.2 2.218824
1971 Sept. 1.42	244 1195.92496	12 W	4 13 37.678	+0.018	- 7 56 35.85	-0.19 8.2 2.206004
Sept. 2.42	244 1196.92294	15 W	4 14 39.567	+0.017	- 8 10 29.13	-0.14 8.2 2.193262
Sept. 5.41	244 1199.91683	15 W	4 17 39.763	+0.015	- 8 53 21.84	+0.00 8.2 2.155520
Sept. 7.41	244 1201.91270	11 W	4 19 35.162	+0.020	- 9 22 57.63	-0.20 8.1 2.130783
Sept. 8.41	244 1202.91062	14 W	4 20 31.381	+0.019	- 9 38 03.64	-0.52 8.1 2.118548
1971 Sept. 16.39	244 1210.89352	15 W	4 27 22.663	+0.016	-11 45 43.16	-0.09 8.0 2.024160
Sept. 18.38	244 1212.88911	8 W	4 28 53.930	+0.020	-12 19 27.23	+0.14 8.0 2.001624
Sept. 20.38	244 1214.88465	12 W	4 30 20.193	+0.001	-12 53 51.71	+0.29 7.9 1.979553
Sept. 24.37	244 1218.87554	11 W	4 32 57.203	+0.026	-14 04 33.41	+0.08 7.9 1.936885
Sept. 25.37	244 1219.87322	7 W	4 33 33.099	+0.037	-14 22 35.43	-0.00 7.9 1.926539
1971 Sept. 26.37	244 1220.87089	14 W	4 34 07.588	+0.026	-14 40 45.58	-0.27 7.9 1.916325
Sept. 27.36	244 1221.86854	14 W	4 34 40.707	+0.046	-14 59 02.73	+0.07 7.9 1.906247
Sept. 28.36	244 1222.86618	8 W	4 35 12.345	+0.010	-15 17 27.49	+0.02 7.8 1.896306
Sept. 29.36	244 1223.86380	15 W	4 35 42.601	+0.030	-15 35 59.23	-0.16 7.8 1.886504
Sept. 30.36	244 1224.86140	12 W	4 36 11.371	+0.025	-15 54 37.50	-0.39 7.8 1.876843
1971 Oct. 3.35	244 1227.85410	8 W	4 37 28.712	-0.015	-16 51 05.77	+0.36 7.8 1.848724
Oct. 4.35	244 1228.85163	8 W	4 37 51.477	-0.005	-17 10 06.07	+0.03 7.8 1.839644
Oct. 5.34	244 1229.84915	7 W	4 38 12.712	+0.022	-17 29 09.78	+0.70 7.7 1.830714
Oct. 9.33	244 1233.83902	11 W	4 39 21.676	+0.026	-18 46 01.92	+0.25 7.7 1.796522
Oct. 10.33	244 1234.83644	7 W	4 39 34.852	+0.029	-19 05 21.17	-0.19 7.7 1.788365
1971 Oct. 11.33	244 1235.83385	7 W	4 39 46.328	-0.000	-19 24 41.21	-0.20 7.7 1.780367
Oct. 12.33	244 1236.83123	15 W	4 39 56.166	+0.012	-19 44 01.62	+0.02 7.7 1.772532
Oct. 13.32	244 1237.82859	8 W	4 40 04.290	+0.011	-20 03 21.87	+0.38 7.7 1.764859
Oct. 14.32	244 1238.82594	12 W	4 40 10.733	+0.038	-20 22 41.80	+0.39 7.6 1.757352
Oct. 15.32	244 1239.82326	15 W	4 40 15.425	+0.037	-20 42 01.02	-0.22 7.6 1.750012
1971 Oct. 17.31	244 1241.81785	15 W	4 40 19.603	+0.032	-21 20 31.24	-0.03 7.6 1.735839
Oct. 18.31	244 1242.81511	15 W	4 40 19.055	0.008	-21 39 41.72	-0.14 7.6 1.729008
Oct. 19.31	244 1243.81236	7 W	4 40 16.836	+0.054	-21 58 48.36	-0.61 7.6 1.722351
Oct. 20.30	244 1244.80958	14 W	4 40 12.778	+0.018	-22 17 49.28	-0.31 7.6 1.715868
Oct. 26.29	244 1250.79249	12 E	4 39 12.039	+0.028	-24 09 29.12	+0.09 7.5 1.680682
1971 Oct. 27.28	244 1251.78958	8 E	4 38 55.891	+0.051	-24 27 34.06	+0.12 7.5 1.675444
Oct. 28.28	244 1252.78664	15 E	4 38 37.986	+0.024	-24 45 27.68	+0.36 7.5 1.670386
Nov. 1.27	244 1256.77470	12 E	4 37 09.776	+0.002	-25 54 57.09	+0.19 7.5 1.651960
Nov. 2.27	244 1257.77167	11 E	4 36 43.637	-0.016	-26 11 44.48	-0.19 7.5 1.647805
Nov. 4.26	244 1259.76555	7 E	4 35 46.726	+0.037	-26 44 30.26	+0.38 7.4 1.640036

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Greenwich Date	Julian Date	Ob	C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1971 Nov. 5.26	244 1260.76247	11	E	4 35 15.896 +0.012	-27 00 28.78 -0.35	7.4	1.636421
Nov. 7.25	244 1262.75624	14	E	4 34 09.808 +0.029	-27 31 28.69 +0.81	7.4	1.629731
Nov. 8.25	244 1263.75310	11	E	4 33 34.543 +0.010	-27 46 31.20 +0.03	7.4	1.626656
Nov. 9.24	244 1264.74995	8	E	4 32 57.889 +0.011	-28 01 12.89 -0.11	7.4	1.623759
Nov. 10.24	244 1265.74678	15	E	4 32 19.880 +0.030	-28 15 33.43 -0.06	7.4	1.621042
1971 Nov. 11.24	244 1266.74360	12	E	4 31 40.519 +0.028	-28 29 32.32 -0.01	7.4	1.618503
Nov. 12.23	244 1267.74040	8	E	4 30 59.855 +0.008	-28 43 09.09 -0.23	7.4	1.616142
Nov. 14.23	244 1269.73396	8	E	4 29 34.991 +0.055	-29 09 11.70 +0.33	7.4	1.611952
Nov. 15.23	244 1270.73072	8	E	4 28 50.762 +0.001	-29 21 37.60 -0.30	7.4	1.610121
Nov. 16.22	244 1271.72746	11	E	4 28 05.555 +0.020	-29 33 37.69 -0.18	7.4	1.608465
1971 Nov. 17.22	244 1272.72420	7	E	4 27 19.354 +0.043	-29 45 11.86 +0.20	7.4	1.606984
Nov. 19.21	244 1274.71764	11	E	4 25 44.136 +0.020	-30 07 02.27 -0.35	7.4	1.604538
Nov. 20.21	244 1275.71435	7	E	4 24 55.334 +0.043	-30 17 16.14 +0.04	7.4	1.603571
Nov. 21.21	244 1276.71104	11	E	4 24 05.776 +0.041	-30 27 02.67 -0.00	7.4	1.602774
Nov. 22.20	244 1277.70773	11	E	4 23 15.566 +0.044	-30 36 20.99 -0.00	7.4	1.602144
1971 Nov. 23.20	244 1278.70442	12	E	4 22 24.780 +0.052	-30 45 11.44 -0.69	7.4	1.601680
Nov. 25.19	244 1280.69777	15	E	4 20 41.683 +0.003	-31 01 23.29 +0.07	7.4	1.601242
Nov. 28.18	244 1283.68776	15	E	4 18 04.654 +0.009	-31 22 00.88 +0.21	7.3	1.601784
Dec. 5.16	244 1290.66441	14	E	4 11 57.328 +0.007	-31 52 36.05 -0.11	7.3	1.608357
Dec. 6.16	244 1291.66108	4	E	4 11 05.829 +0.007	-31 54 56.43 +0.29	7.3	1.609874
1971 Dec. 9.15	244 1294.65115	12	E	4 08 34.394 +0.013	-31 58 58.05 -0.43	7.3	1.615250
Dec. 10.14	244 1295.64785	15	E	4 07 45.196 +0.029	-31 59 17.39 +0.40	7.3	1.617311
Dec. 11.14	244 1296.64456	8	E	4 06 56.729 +0.026	-31 59 08.46 -0.29	7.3	1.619502
Dec. 13.13	244 1298.63801	8	E	4 05 22.338 +0.020	-31 57 20.32 -0.11	7.3	1.624268
Dec. 14.13	244 1299.63475	11	E	4 04 36.572 +0.033	-31 55 42.25 +0.13	7.3	1.626839
1971 Dec. 15.13	244 1300.63150	4	E	4 03 51.794 +0.011	-31 53 35.74 -0.08	7.3	1.629532
Dec. 16.12	244 1301.62827	7	E	4 03 08.158 +0.030	-31 51 00.77 -0.40	7.4	1.632346
Dec. 17.12	244 1302.62505	11	E	4 02 25.654 +0.028	-31 47 57.06 -0.21	7.4	1.635277
Dec. 18.12	244 1303.62184	4	E	4 01 44.338 +0.002	-31 44 25.34 +0.14	7.4	1.638324
Dec. 20.11	244 1305.61547	13	E	4 00 25.638 -0.003	-31 36 01.14 -0.41	7.4	1.644755
1971 Dec. 22.10	244 1307.60916	12	E	3 59 12.500 +0.033	-31 25 50.15 -0.44	7.4	1.651620
Dec. 23.10	244 1308.60604	8	E	3 58 38.077 +0.013	-31 20 04.60 +0.97	7.4	1.655209
Dec. 25.09	244 1310.59983	13	W	3 57 33.839 -0.014	-31 07 22.31 +0.26	7.4	1.662688
Dec. 27.09	244 1312.59371	13	W	3 56 36.009 -0.010	-30 53 04.17 -0.70	7.4	1.670553
Dec. 28.09	244 1313.59067	4	W	3 56 09.603 +0.023	-30 45 19.86 -0.65	7.4	1.674625
1971 Dec. 29.08	244 1314.58765	11	W	3 55 44.850 +0.029	-30 37 12.60 -0.09	7.4	1.678786
1972 Jan. 4.06	244 1320.56998	13	W	3 53 52.774 +0.025	-29 41 10.80 -0.75	7.4	1.705525
Jan. 5.06	244 1321.56710	8	W	3 53 40.272 -0.022	-29 30 40.73 +0.01	7.4	1.710261
Jan. 8.05	244 1324.55861	8	W	3 53 13.890 -0.008	-28 57 25.06 -0.20	7.4	1.724910
Jan. 12.04	244 1328.54758	4	W	3 53 04.609 +0.021	-28 09 09.80 +0.53	7.4	1.745413
1972 Jan. 13.04	244 1329.54488	7	W	3 53 06.926 +0.009	-27 56 28.65 -0.31	7.5	1.750701
Jan. 15.03	244 1331.53953	4	W	3 53 17.185 +0.005	-27 30 22.26 -0.38	7.5	1.761460
Jan. 26.01	244 1342.51167	7	W	3 56 25.300 +0.043	-24 52 43.21 -0.33	7.5	1.824436
Jan. 27.00	244 1343.50926	4	W	3 56 53.126 +0.031	-24 37 25.87 -0.17	7.5	1.830436
Jan. 29.00	244 1345.50450	7	W	3 57 53.958 +0.042	-24 06 29.33 -0.58	7.5	1.842557
1972 Jan. 30.00	244 1346.50215	13	W	3 58 26.842 -0.011	-23 50 48.88 +0.88	7.5	1.848675
1973 Feb. 19.41	244 1732.91473	15	E	15 16 00.912 +0.012	+ 5 10 31.29 -0.18	8.1	2.117106
Feb. 23.40	244 1736.90570	7	E	15 18 44.619 +0.031	+ 6 08 52.49 -0.35	8.1	2.080821
Feb. 25.40	244 1738.90109	4	E	15 19 58.050 +0.027	+ 6 39 13.06 +0.21	8.1	2.063283
Feb. 26.39	244 1739.89876	7	E	15 20 32.599 +0.024	+ 6 54 39.06 -0.45	8.1	2.054678
1973 Mar. 1.39	244 1742.89166	8	E	15 22 07.357 +0.002	+ 7 42 03.28 -0.11	8.0	2.029562
Mar. 2.38	244 1743.88926	15	E	15 22 35.978 +0.046	+ 7 58 11.66 -0.13	8.0	2.021436
Mar. 9.37	244 1750.87195	4	E	15 25 12.347 +0.048	+ 9 55 24.38 -0.11	8.0	1.968386
Mar. 19.34	244 1760.84565	12	E	15 26 38.963 -0.015	+12 52 13.76 -0.27	7.9	1.906056
Mar. 20.34	244 1761.84291	4	E	15 26 38.658 +0.018	+13 10 16.44 +0.25	7.9	1.900797
1973 Mar. 22.33	244 1763.83739	7	E	15 26 33.044 +0.010	+13 46 24.54 -0.65	7.9	1.890848
Mar. 23.33	244 1764.83460	4	E	15 26 27.816 +0.046	+14 04 30.73 -0.10	7.9	1.886163
Mar. 24.33	244 1765.83179	11	E	15 26 20.903 +0.036	+14 22 36.34 -0.08	7.9	1.881675
Mar. 27.32	244 1768.82324	8	E	15 25 50.393 +0.017	+15 16 46.25 -0.30	7.9	1.869421
Mar. 28.31	244 1769.82036	15	E	15 25 37.042 +0.065	+15 34 45.30 -0.22	7.9	1.865748
1973 Apr. 1.30	244 1773.80864	8	E	15 24 27.499 +0.018	+16 46 00.84 -0.35	7.9	1.853182
Apr. 4.29	244 1776.79966	7	E	15 23 19.198 +0.027	+17 38 26.08 +0.33	7.9	1.846056
Apr. 6.29	244 1778.79358	11	E	15 22 26.295 +0.008	+18 12 41.62 +0.15	7.9	1.842430
Apr. 7.29	244 1779.79052	7	E	15 21 57.727 -0.006	+18 29 34.57 -0.37	7.9	1.840958
Apr. 9.28	244 1781.78436	11	E	15 20 56.574 +0.005	+19 02 49.15 -0.40	7.9	1.838704
1973 Apr. 10.28	244 1782.78125	12	E	15 20 24.051 +0.024	+19 19 09.16 -0.20	7.9	1.837923
Apr. 11.27	244 1783.77813	8	E	15 19 50.219 -0.003	+19 35 15.91 -0.71	7.9	1.837373
Apr. 12.27	244 1784.77500	12	E	15 19 15.229 +0.030	+19 51 10.27 -0.47	7.9	1.837056
Apr. 13.27	244 1785.77185	8	E	15 18 39.013 +0.021	+20 06 50.83 -0.23	7.9	1.836970
Apr. 16.26	244 1788.76233	4	E	15 16 43.730 +0.028	+20 52 23.35 +0.10	7.9	1.838108
1973 Apr. 18.25	244 1790.75592	4	E	15 15 21.743 +0.026	+21 21 24.76 -0.09	7.9	1.840029
Apr. 19.25	244 1791.75270	11	E	15 14 39.331 +0.010	+21 35 29.82 -0.16	7.9	1.841337
Apr. 24.23	244 1796.73646	8	E	15 10 55.289 +0.038	+22 41 17.73 -0.44	7.9	1.851343
Apr. 26.22	244 1798.72991	8	E	15 09 21.002 +0.075	+23 05 19.48 +0.31	8.0	1.856952
Apr. 28.22	244 1800.72334	8	E	15 07 44.575 +0.020	+23 27 55.70 -0.42	8.0	1.863470

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Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1973 May 1.21	244 1803.71345	4 E	15 05 17.196 +0.005	+23 59 06.94 -0.91	8.0	1.874931
May 4.20	244 1806.70353	11 E	15 02 47.974 +0.036	+24 26 55.87 -0.24	8.0	1.888377
May 5.19	244 1807.70023	11 E	15 01 58.054 +0.001	+24 35 25.47 -0.50	8.0	1.893292
May 10.18	244 1812.68372	15 E	14 57 50.392 +0.020	+25 12 03.74 -0.53	8.1	1.921009
May 13.17	244 1815.67385	12 E	14 55 25.199 +0.025	+25 29 23.56 +0.68	8.1	1.940056
1973 May 25.13	244 1827.63502	8 E	14 46 39.619 +0.023	+26 04 43.02 -0.72	8.2	2.032732
May 31.11	244 1833.61616	7 E	14 43 05.128 +0.016	+26 03 26.00 -0.57	8.3	2.087914
June 1.11	244 1834.61306	11 E	14 42 33.252 +0.003	+26 02 06.50 +0.27	8.3	2.097621
June 2.10	244 1835.60998	7 E	14 42 02.585 +0.014	+26 00	8.3	2.107465
June 5.10	244 1838.60081	8 E	14 40 37.849 +0.009	+25 53 44.75 -0.35	8.3	2.137788
1973 June 10.08	244 1843.58582	16 E	14 38 41.897 +0.000	+25 37 04.16 -0.83	8.4	2.190762
June 12.07	244 1845.57993	11 E	14 38 04.640 +0.014	+25 28 38.95 -0.09	8.4	2.212730
June 21.05	244 1854.55417	8 E	14 36 22.144 -0.088	+24 39 52.60 -0.27	8.6	2.316332

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Greenwich	Date	Julian Date	Ob	C	Right Ascension	(O-C)	Declination	(O-C)	Mag	Distance
1968 Apr.	12.24	243 9958.74754	2	W	14 40 29.776	+0.027	- 2 11 47.75	+0.50	9.9	2.304251
Apr.	23.21	243 9969.71171	2	W	14 32 08.257	+0.012	- 0 57 32.80	-0.19	9.9	2.288395
1969 May	25.30	244 0366.81007	9	E	18 59 21.277	+0.019	- 5 29 25.05	-0.05	9.9	2.349233
May	27.30	244 0368.80402	10	E	18 58 30.594	+0.065	- 5 23 33.46	-0.94	9.9	2.328278
May	31.29	244 0372.79176	7	E	18 56 34.605	+0.026	- 5 12 55.88	+0.25	9.8	2.288708
1969 June	2.28	244 0374.78555	10	E	18 55 29.619	+0.025	- 5 08 14.88	-0.36	9.8	2.270144
June	4.27	244 0376.77929	5	E	18 54 20.103	+0.018	- 5 03 59.28	-0.41	9.8	2.252431
June	16.24	244 0388.74073	9	E	18 45 58.367	-0.008	- 4 48 27.89	-0.08	9.7	2.165483
June	23.21	244 0395.71764	9	E	18 40 14.132	+0.047	- 4 48 11.49	-0.26	9.6	2.131397
June	29.19	244 0401.69766	9	E	18 35 02.207	+0.013	- 4 53 21.89	-0.22	9.6	2.112517
1969 July	5.17	244 0407.67762	4	E	18 29 45.201	+0.020	- 5 03 30.45	-0.28	9.6	2.103309
July	10.16	244 0412.66096	10	E	18 25 24.437	+0.057	- 5 16		9.6	2.103035
July	16.14	244 0418.64112	6	E	18 20 24.724	+0.007	- 5 34 20.73	-0.08	9.6	2.111458
July	20.12	244 0422.62803	10	E	18 17 17.671	-0.012	- 5 49 07.95	-0.34	9.6	2.122206
July	28.10	244 0430.60237	10	E	18 11 46.183	+0.038	- 6 23 26.09	-0.95	9.6	2.155244
1969 Aug.	1.08	244 0434.58982	5	E	18 09 25.730	-0.003	- 6 42 34.31	-1.05	9.6	2.177118
Aug.	6.07	244 0439.57446	8	E	18 06 57.200	-0.004	- 7 07 57.90	-0.29	9.6	2.209060
Aug.	8.06	244 0441.56841	8	E	18 06 06.749	-0.012	- 7 18 30.06	+0.74	9.7	2.223180
Aug.	9.06	244 0442.56541	8	E	18 05 43.549	+0.015	- 7 23		9.7	2.230512
Aug.	11.05	244 0444.55946	7	E	18 05 01.145	+0.002	- 7 34 40.58	+0.86	9.7	2.245703
1969 Aug.	12.05	244 0445.55651	5	E	18 04 41.986	-0.018	- 7 40 10.34	-0.50	9.7	2.253553
Aug.	17.04	244 0450.54200	9	E	18 03 27.305	+0.002	- 8 08 00.12	-0.30	9.7	2.295180
Aug.	21.03	244 0454.53068	7	E	18 02 53.157	-0.011	- 8 30 39.22	-0.45	9.7	2.331074
Aug.	25.01	244 0458.51963	9	E	18 02 41.960	+0.006	- 8 53 28.04	-0.92	9.8	2.368970
Sept.	1.99	244 0466.49831	7	E	18 03 27.114	-0.027	- 9 38 57.05	-1.05	9.8	2.449768
1969 Sept.	3.99	244 0468.49314	8	E	18 03 52.398	+0.077	- 9 50 10.59	+0.26	9.8	2.470845
Sept.	4.99	244 0469.49058	7	E	18 04 06.947	-0.015	- 9 55 46.70	-0.12	9.9	2.481496
Sept.	7.98	244 0472.48299	8	E	18 04 59.011	+0.003	-10 12		9.9	2.513854
1970 Aug.	1.44	244 0799.94418	7	W	2 40 08.100	-0.026	+ 9 53 14.79	-0.21	8.5	1.883361
Aug.	4.43	244 0802.93931	11	W	2 44 56.258	+0.047	+ 9 54 09.39	+0.28	8.5	1.846042
1970 Aug.	5.43	244 0803.93768	8	W	2 46 31.193	+0.065	+ 9 54		8.4	1.833654
Aug.	6.43	244 0804.93604	10	W	2 48 05.502	+0.040	+ 9 53 53.43	-0.67	8.4	1.821295
Aug.	9.43	244 0807.93107	11	W	2 52 44.804	-0.001	+ 9 52 13.56	+0.28	8.4	1.784401
Aug.	10.42	244 0808.92940	11	W	2 54 16.634	-0.014	+ 9 51 19.11	+0.62	8.4	1.772170
Aug.	11.42	244 0809.92772	7	W	2 55 47.818	-0.010	+ 9 50 13.50	+0.50	8.3	1.759974
1970 Aug.	17.41	244 0815.91748	9	W	3 04 39.977	+0.028	+ 9 39 50.80	-0.12	8.2	1.687608
Aug.	19.41	244 0817.91400	8	W	3 07 31.189	+0.049	+ 9 34 55.34	+1.24	8.2	1.663821
Aug.	20.41	244 0818.91224	11	W	3 08 55.448	-0.034	+ 9 32 08.92	+0.43	8.2	1.651995
Aug.	22.40	244 0820.90870	8	W	3 11 41.568	+0.027	+ 9 26 02.74	+0.29	8.2	1.628484
Aug.	23.40	244 0821.90691	12	W	3 13 03.171	-0.034	+ 9 22 41.87	-0.01	8.1	1.616802
1970 Aug.	25.40	244 0823.90330	4	W	3 15 43.690	+0.017	+ 9 15 25.64	+0.38	8.1	1.593593
Aug.	26.40	244 0824.90148	7	W	3 17 02.438	+0.018	+ 9 11 29.40	+0.33	8.1	1.582070
Aug.	27.39	244 0825.89964	5	W	3 18 20.142	+0.007	+ 9 07 21.53	+0.65	8.1	1.570602
Aug.	29.39	244 0827.89594	7	W	3 20 52.410	+0.043	+ 8 58 28.30	+0.03	8.0	1.547845
Aug.	30.39	244 0828.89407	4	W	3 22 06.836	+0.007	+ 8 53 43.90	+0.12	8.0	1.536559
1970 Sept.	1.38	244 0830.89029	8	W	3 24 32.313	-0.000	+ 8 43 38.21	-0.05	8.0	1.514182
Sept.	2.38	244 0831.88838	12	W	3 25 43.284	+0.000	+ 8 38 16.62	-0.56	8.0	1.503095
Sept.	3.38	244 0832.88645	11	W	3 26 53.047	+0.006	+ 8 32 44.06	+0.16	8.0	1.492078
Sept.	6.38	244 0835.88059	8	W	3 30 14.810	+0.029	+ 8 14 50.96	+0.15	7.9	1.459473
Sept.	7.37	244 0836.87861	10	W	3 31 19.457	+0.020	+ 8 08 28.54	-0.26	7.9	1.448760
1970 Sept.	8.37	244 0837.87661	7	W	3 32 22.788	+0.031	+ 8 01 54.82	+0.13	7.9	1.438127
Sept.	10.37	244 0839.87256	4	W	3 34 25.304	+0.016	+ 7 48 09.98	-0.31	7.8	1.417113
Sept.	11.37	244 0840.87051	7	W	3 35 24.480	+0.031	+ 7 41 00.08	-0.01	7.8	1.406736
Sept.	14.36	244 0843.86427	7	W	3 38 13.214	+0.023	+ 7 18 18.34	+0.45	7.8	1.376142
Sept.	15.36	244 0844.86215	11	W	3 39 06.477	+0.038	+ 7 10 20.85	+0.77	7.7	1.366129
1970 Sept.	18.35	244 0847.85570	12	W	3 41 36.870	+0.049	+ 6 45 16.72	+0.45	7.7	1.336676
Sept.	19.35	244 0848.85351	8	W	3 42 23.766	+0.033	+ 6 36 32.39	+0.56	7.7	1.327060
Sept.	20.35	244 0849.85130	10	W	3 43 08.988	+0.002	+ 6 27 35.89	-0.10	7.7	1.317548
Sept.	24.34	244 0853.84227	7	W	3 45 52.903	+0.080	+ 5 50 01.23	-0.23	7.6	1.280596
Sept.	28.33	244 0857.83291	13	W	3 48 07.916	+0.055	+ 5 09		7.5	1.245531
1970 Sept.	29.33	244 0858.83051	8	W	3 48 36.972	+0.027	+ 4 59 07.14	-0.11	7.5	1.237081
Sept.	30.32	244 0859.82810	8	W	3 49 04.140	+0.019	+ 4 48 27.06	-0.32	7.5	1.228764
Oct.	2.32	244 0861.82320	12	W	3 49 52.735	+0.047	+ 4 26 41.08	+0.03	7.5	1.212538
Oct.	3.32	244 0862.82071	8	W	3 50 14.082	+0.030	+ 4 15 35.56	+0.23	7.5	1.204636
Oct.	4.31	244 0863.81821	12	W	3 50 33.493	+0.037	+ 4 04 21.58	-0.16	7.4	1.196878
1970 Oct.	5.31	244 0864.81568	8	W	3 50 50.945	+0.053	+ 3 52 59.99	-0.72	7.4	1.189267
Oct.	8.30	244 0867.80795	5	E	3 51 31.346	+0.032	+ 3 18 17.51	+0.29	7.4	1.167344
Oct.	9.30	244 0868.80533	7	E	3 51 40.827	+0.014	+ 3 06 30.99	+0.23	7.4	1.160348
Oct.	10.30	244 0869.80269	4	E	3 51 48.339	+0.018	+ 2 54 39.28	+0.19	7.4	1.153513
Oct.	12.29	244 0871.79733	7	E	3 51 57.397	+0.030	+ 2 30 42.43	+0.44	7.3	1.140334
1970 Oct.	14.29	244 0873.79188	11	E	3 51 58.547	+0.064	+ 2 06 30.83	+0.85	7.3	1.127824
Oct.	15.28	244 0874.78913	10	E	3 51 56.112	+0.030	+ 1 54 19.77	+0.02	7.3	1.121827
Oct.	16.28	244 0875.78634	11	E	3 51 51.739	+0.019	+ 1 42 07.92	+0.43	7.3	1.116004
Oct.	17.28	244 0876.78354	11	E	3 51 45.442	+0.038	+ 1 29 53.42	-0.37	7.3	1.110359
Oct.	21.27	244 0880.77211	5	E	3 51 00.891	+0.027	+ 0 40 57.87	+0.13	7.2	1.089603

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Greenwich	Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1970	Oct. 22.26	244 0881.76919	7 E	3 50 45.022 +0.022	+ 0 28 47.24 +0.37	7.2	1.084884
	Oct. 24.26	244 0883.76330	5 E	3 50 07.835 +0.055	+ 0 04 33.81 -0.19	7.2	1.076030
	Oct. 25.25	244 0884.76033	4 E	3 49 46.534 +0.040	- 0 07	7.2	1.071899
	Oct. 27.25	244 0886.75431	11 E	3 48 58.805 +0.029	- 0 31 10.80 +0.59	7.2	1.064242
	Oct. 30.24	244 0889.74516	11 E	3 47 35.114 +0.043	- 1 05 56.30 +0.25	7.1	1.054304
1970	Oct. 31.24	244 0890.74207	8 E	3 47 04.220 +0.061	- 1 17 14.43 -0.10	7.1	1.051412
	Nov. 1.23	244 0891.73897	11 E	3 46 31.930 +0.083	- 1 28 21.96 +0.12	7.1	1.048733
	Nov. 2.23	244 0892.73585	10 E	3 45 58.252 +0.050	- 1 39 19.27 -0.30	7.1	1.046268
	Nov. 3.23	244 0893.73271	5 E	3 45 23.345 +0.054	- 1 50 03.75 +0.45	7.1	1.044019
	Nov. 4.22	244 0894.72957	7 E	3 44 47.228 +0.039	- 2 00 37.06 -0.09	7.1	1.041988
1970	Nov. 5.22	244 0895.72641	4 E	3 44 10.036 +0.068	- 2 10 56.33 +0.20	7.1	1.040174
	Nov. 6.22	244 0896.72323	7 E	3 43 31.710 +0.006	- 2 21 01.48 +0.64	7.1	1.038578
	Nov. 7.21	244 0897.72005	7 E	3 42 52.510 +0.032	- 2 30 52.46 +0.57	7.1	1.037202
	Nov. 8.21	244 0898.71686	5 E	3 42 12.414 +0.047	- 2 40 28.30 +0.28	7.1	1.036045
	Nov. 9.21	244 0899.71366	5 E	3 41 31.474 +0.023	- 2 49 47.77 +0.35	7.1	1.035107
1970	Nov. 11.20	244 0901.70723	12 E	3 40 07.533 -0.008	- 3 07 35.51 +1.06	7.1	1.033890
	Nov. 12.20	244 0902.70400	11 E	3 39 24.745 +0.033	- 3 16 04.16 +0.08	7.1	1.033610
	Nov. 16.19	244 0906.69106	8 E	3 36 29.499 +0.016	- 3 46 43.87 +0.70	7.1	1.034682
	Nov. 17.18	244 0907.68781	14 E	3 35 45.122 +0.012	- 3 53 33.75 +0.69	7.1	1.035496
	Nov. 19.18	244 0909.68133	5 E	3 34 16.328 +0.052	- 4 06 09.99 +0.66	7.1	1.037776
1970	Nov. 20.17	244 0910.67809	7 E	3 33 32.007 +0.020	- 4 11 55.93 +0.26	7.1	1.039242
	Nov. 21.17	244 0911.67485	5 E	3 32 47.931 +0.029	- 4 17 19.08 +0.44	7.1	1.040923
	Nov. 22.17	244 0912.67161	13 E	3 32 04.129 +0.020	- 4 22 19.57 +0.75	7.1	1.042818
	Nov. 23.16	244 0913.66838	13 E	3 31 20.752 +0.056	- 4 26 57.84 +0.49	7.1	1.044927
	Nov. 24.16	244 0914.66515	11 E	3 30 37.765 +0.015	- 4 31 13.01 +0.26	7.1	1.047249
1970	Nov. 25.16	244 0915.66193	12 E	3 29 55.440 +0.079	- 4 35 04.93 -0.01	7.1	1.049782
	Nov. 26.15	244 0916.65872	8 E	3 29 13.647 +0.037	- 4 38 33.30 -0.17	7.1	1.052524
	Nov. 27.15	244 0917.65552	11 E	3 28 32.623 +0.037	- 4 41 37.47 +0.26	7.1	1.055474
	Nov. 29.14	244 0919.64914	10 E	3 27 13.098 +0.051	- 4 46 35.34 +0.50	7.2	1.061990
	Nov. 30.14	244 0920.64597	10 E	3 26 34.714 +0.022	- 4 48 28.71 +0.55	7.2	1.065551
1970	Dec. 1.14	244 0921.64280	5 E	3 25 57.407 +0.026	- 4 49 58.61 +0.37	7.2	1.069313
	Dec. 3.13	244 0923.63652	5 E	3 24 46.204 +0.035	- 4 51 47.56 +0.21	7.2	1.077424
	Dec. 5.12	244 0925.63030	5 E	3 23 39.965 +0.019	- 4 52 02.78 +0.72	7.2	1.086301
	Dec. 9.11	244 0929.61804	8 E	3 21 44.340 +0.038	- 4 48 03.49 +0.35	7.3	1.106261
	Dec. 10.11	244 0930.61502	14 E	3 21 19.266 +0.088	- 4 46 09.28 -0.08	7.3	1.111694
1970	Dec. 11.11	244 0931.61202	12 E	3 20 55.681 +0.031	- 4 43 53.65 -0.32	7.3	1.117298
	Dec. 12.10	244 0932.60903	8 E	3 20 33.789 +0.037	- 4 41 15.99 +0.62	7.3	1.123070
	Dec. 13.10	244 0933.60607	13 E	3 20 13.587 +0.072	- 4 38 19.12 +0.28	7.3	1.129008
	Dec. 14.10	244 0934.60313	13 E	3 19 55.010 +0.043	- 4 35 02.07 +0.01	7.3	1.135110
	Dec. 15.09	244 0935.60020	4 E	3 19 38.174 +0.040	- 4 31 25.16 -0.10	7.3	1.141372
1970	Dec. 16.09	244 0936.59730	5 E	3 19 23.060 +0.020	- 4 27 28.33 +0.39	7.3	1.147793
	Dec. 17.09	244 0937.59441	7 E	3 19 09.689 -0.016	- 4 23 12.65 +0.85	7.3	1.154369
	Dec. 18.09	244 0938.59155	7 E	3 18 58.177 +0.024	- 4 18 39.16 +0.64	7.4	1.161098
	Dec. 19.08	244 0939.58871	5 E	3 18 48.432 +0.028	- 4 13 48.09 -0.03	7.4	1.167977
	Dec. 20.08	244 0940.58588	7 E	3 18 40.506 +0.030	- 4 08 38.14 +0.53	7.4	1.175004
1970	Dec. 21.08	244 0941.58308	10 E	3 18 34.415 +0.030	- 4 03 11.99 +0.10	7.4	1.182177
	Dec. 25.07	244 0945.57209	13 E	3 18 28.681 +0.021	- 3 38 41.73 +0.68	7.5	1.212265
	Dec. 26.06	244 0946.56940	10 E	3 18 31.947 +0.008	- 3 31 56.15 +0.23	7.5	1.220124
	Dec. 28.06	244 0948.56408	13 E	3 18 44.231 +0.042	- 3 17 40.89 +0.23	7.5	1.236226
	Dec. 29.06	244 0949.56146	5 E	3 18 53.197 +0.034	- 3 10 12.65 +0.18	7.5	1.244464
1970	Dec. 30.05	244 0950.55885	7 E	3 19 04.055 +0.022	- 3 02 31.28 +0.15	7.5	1.252822
	Dec. 31.05	244 0951.55627	4 E	3 19 16.800 +0.008	- 2 54 37.56 -0.13	7.5	1.261298
1971	Jan. 3.04	244 0954.54865	8 E	3 20 06.377 +0.035	- 2 29 44.66 +0.02	7.6	1.287400
	Jan. 4.04	244 0955.54615	8 E	3 20 26.592 +0.010	- 2 21 04.13 +1.03	7.6	1.296317
	Jan. 5.04	244 0956.54368	12 E	3 20 48.695 +0.032	- 2 12 14.80 +0.63	7.6	1.305336
1971	Jan. 13.02	244 0964.52461	4 E	3 24 49.423 +0.015	- 0 56 22.13 +0.50	7.8	1.380921
	Jan. 17.01	244 0968.51555	13 E	3 27 30.441 +0.022	- 0 15 37.13 +0.41	7.8	1.420785
	Jan. 19.01	244 0970.51113	8 E	3 29 00.520 -0.030	+ 0 05 17.57 +0.47	7.9	1.441184
	Jan. 20.00	244 0971.50894	12 E	3 29 47.985 +0.025	+ 0 15 51.64 +0.32	7.9	1.451494
	Jan. 21.00	244 0972.50678	11 E	3 30 36.914 +0.004	+ 0 26 29.55 -0.17	7.9	1.461875
1971	Jan. 22.00	244 0973.50463	8 E	3 31 27.438 +0.057	+ 0 37 12.55 +0.55	7.9	1.472325
1972	Feb. 17.34	244 1364.84063	8 W	13 18 09.058 +0.021	- 3 44 29.10 -0.57	9.6	2.236492
	Feb. 19.33	244 1366.83495	8 W	13 17 50.442 +0.031	- 3 33 16.96 -0.75	9.6	2.218462
	Feb. 28.30	244 1375.80863	13 W	13 15 19.322 +0.016	- 2 35 31.95 +0.10	9.6	2.146359
	Feb. 29.30	244 1376.80563	12 W	13 14 56.008 +0.072	- 2 28 22.74 +3.19	9.6	2.139349
1972	Mar. 1.30	244 1377.80262	8 W	13 14 31.298 -0.007	- 2 21 12.20 +0.07	9.6	2.132555
	Mar. 4.29	244 1380.79349	8 W	13 13 10.058 +0.023	- 1 58 48.28 -0.04	9.5	2.113513
	Mar. 16.25	244 1392.75583	12 W	13 06 06.309 +0.033	- 0 20 43.02 -0.32	9.5	2.059457
	Mar. 17.25	244 1393.75263	8 W	13 05 24.978 +0.037	- 0 12 07.48 -0.38	9.5	2.056684
	Mar. 18.24	244 1394.74941	15 W	13 04 42.870 -0.002	- 0 03 29.35 +0.15	9.5	2.054192
1972	Mar. 19.24	244 1395.74619	8 W	13 04 00.133 +0.020	+ 0 05 09.73 +0.03	9.5	2.051984
	Mar. 20.24	244 1396.74295	8 W	13 03 16.763 +0.052	+ 0 13 50.19 +0.12	9.5	2.050061
	Mar. 22.23	244 1398.73647	7 W	13 01 48.181 +0.019	+ 0 31 12.19 -0.39	9.5	2.047080
	Mar. 29.21	244 1405.71363	15 W	12 56 24.792 +0.011	+ 1 31 37.51 -0.04	9.5	2.045844
	Mar. 31.20	244 1407.70707	15 W	12 54 50.130 +0.002	+ 1 48 33.33 +0.37	9.5	2.048141

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Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1972 Apr. 1.20	244 1408.70379	8 W	12 54 02.678 +0.009	+ 1 56 55.00 -0.24	9.5	2.049734
Apr. 2.20	244 1409.70052	15 W	12 53 15.223 +0.038	+ 2 05 13.27 -0.13	9.5	2.051621
Apr. 3.19	244 1410.69724	13 W	12 52 27.721 -0.006	+ 2 13 26.26 -0.76	9.5	2.053804
Apr. 5.19	244 1412.69068	4 W	12 50 53.075 +0.003	+ 2 29 38.93 -0.26	9.5	2.059054
Apr. 9.17	244 1416.67760	14 W	12 47 46.160 +0.024	+ 3 00 52.71 -0.26	9.6	2.073070
1972 Apr. 11.17	244 1418.67109	8 W	12 46 14.603 +0.005	+ 3 15 48.36 -0.72	9.6	2.081819
Apr. 17.15	244 1424.65168	13 E	12 41 52.256 +0.020	+ 3 57 22.47 -0.54	9.6	2.114858
Apr. 18.14	244 1425.64847	11 E	12 41 10.748 -0.011	+ 4 03 46.63 -0.75	9.6	2.121327
Apr. 19.14	244 1426.64527	7 E	12 40 30.057 +0.028	+ 4 10 01.59 -0.62	9.6	2.128062
Apr. 27.11	244 1434.62002	8 E	12 35 34.830 -0.003	+ 4 53 59.20 -0.58	9.7	2.191088
1972 Apr. 28.11	244 1435.61691	15 E	12 35 02.203 +0.019	+ 4 58 41.75 -0.81	9.7	2.200052
Apr. 29.11	244 1436.61381	12 E	12 34 30.560 +0.002	+ 5 03 14.10 -0.53	9.7	2.209245
Apr. 30.11	244 1437.61073	13 E	12 33 59.990 +0.014	+ 5 07 35.37 -0.57	9.7	2.218662
May 1.10	244 1438.60766	13 E	12 33 30.475 +0.018	+ 5 11 46.51 +0.08	9.7	2.228299
May 12.07	244 1449.57473	12 E	12 29 19.826 -0.005	+ 5 45 46.76 +0.55	9.9	2.347737
1972 May 22.04	244 1459.54624	13 E	12 27 36.904 -0.007	+ 5 58 06.22 -0.14	10.0	2.474355
1973 Apr. 11.36	244 1783.86812	8 E	17 29 46.251 +0.024	- 7 49 47.46 +0.34	10.3	2.746710
May 6.29	244 1808.79544	7 E	17 23 23.771 +0.008	- 5 49 08.49 +0.17	10.1	2.472128
May 25.23	244 1827.73483	8 E	17 10 47.348 +0.108	- 4 34 26.32 +4.21	10.0	2.350110
June 1.21	244 1834.71176	11 E	17 05 04.128 +0.015	- 4 15 54.74 -0.15	10.0	2.328631
1973 June 2.20	244 1835.70845	7 E	17 04 13.655 +0.032	- 4 13	10.0	2.326663
June 5.19	244 1838.69849	8 E	17 01 40.942 +0.017	- 4 07 32.88 +0.44	10.0	2.322423
June 12.17	244 1845.67525	11 E	16 55 43.333 -0.014	- 3 57 47.54 -0.40	10.0	2.322203
June 14.16	244 1847.66863	7 E	16 54 02.511 +0.042	- 3 56 10.69 -0.68	10.0	2.324596

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Greenwich Date	Julian Date	Ob	C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1968 July 9.46	244 0046.96909	1	W	1 47 21.149 +0.008	+ 3 25 07.00 +0.40	7.3	2.343345
July 10.46	244 0047.96716	5	W	1 48 31.017 +0.020	+ 3 28 55.79 +0.18	7.3	2.332197
July 19.44	244 0056.94944	6	W	1 58 24.158 -0.000	+ 3 58 05.92 +0.18	7.2	2.230929
July 24.43	244 0061.93924	4	W	2 03 23.317 +0.026	+ 4 10 05.73 +0.52	7.1	2.174214
July 27.43	244 0064.93298	6	W	2 06 11.173 +0.034	+ 4 15 46.30 +0.06	7.1	2.140164
1968 Aug. 2.41	244 0070.92015	7	W	2 11 18.506 +0.052	+ 4 23 38.68 -0.06	7.0	2.072310
Aug. 8.40	244 0076.90684	5	W	2 15 45.010 -0.002	+ 4 26 48.35 +0.44	7.0	2.005208
Aug. 14.39	244 0082.89302	7	W	2 19 26.805 +0.022	+ 4 25 07.15 +0.41	6.9	1.939346
Aug. 16.38	244 0084.88829	2	W	2 20 30.008 +0.004	+ 4 23 27.88 +0.63	6.9	1.917762
Aug. 17.38	244 0085.88590	8	W	2 20 59.549 +0.036	+ 4 22 25.92 +0.84	6.8	1.907052
1968 Aug. 20.37	244 0088.87863	6	W	2 22 19.401 +0.028	+ 4 18 28.83 +0.04	6.8	1.875295
Aug. 21.37	244 0089.87617	5	W	2 22 43.069 +0.035	+ 4 16 53.34 -0.08	6.8	1.864845
Aug. 22.37	244 0090.87370	4	W	2 23 05.210 +0.029	+ 4 15 09.87 +0.12	6.8	1.854468
Aug. 23.37	244 0091.87120	6	W	2 23 25.820 +0.026	+ 4 13 17.93 +0.13	6.8	1.844168
Aug. 24.36	244 0092.86869	5	W	2 23 44.854 -0.002	+ 4 11 17.96 +0.36	6.8	1.833949
1968 Aug. 27.36	244 0095.86105	2	W	2 24 32.593 +0.014	+ 4 04 27.97 +0.05	6.7	1.803817
Aug. 28.35	244 0096.85847	8	W	2 24 45.314 +0.025	+ 4 01 55.61 +0.40	6.7	1.793961
Aug. 29.35	244 0097.85587	7	W	2 24 56.422 +0.042	+ 3 59 14.66 +0.08	6.7	1.784205
Aug. 31.35	244 0099.85061	8	W	2 25 13.693 +0.030	+ 3 53 30.00 +0.14	6.7	1.765009
Sept. 4.33	244 0103.83985	4	W	2 25 28.362 +0.042	+ 3 40 28.87 -0.16	6.6	1.727981
1968 Sept. 5.33	244 0104.83712	6	W	2 25 27.802 +0.028	+ 3 36 55.36 +0.09	6.6	1.719030
Sept. 10.32	244 0109.82314	8	W	2 24 59.421 +0.031	+ 3 17 20.68 +0.48	6.6	1.676290
Sept. 14.31	244 0113.81160	2	W	2 24 05.673 +0.029	+ 2 59 41.00 +0.28	6.5	1.644763
Sept. 19.29	244 0118.79672	4	W	2 22 19.735 +0.034	+ 2 35 25.90 +0.22	6.5	1.609138
Sept. 21.29	244 0120.79063	5	W	2 21 25.514 +0.046	+ 2 25 09.17 +0.33	6.5	1.596181
1968 Sept. 26.27	244 0125.77509	2	W	2 18 41.620 +0.018	+ 1 58 20.71 +0.53	6.5	1.567335
Sept. 27.27	244 0126.77193	8	W	2 18 04.274 +0.057	+ 1 53	6.4	1.562207
Sept. 28.26	244 0127.76875	8	W	2 17 25.426 +0.051	+ 1 47 18.16 +0.73	6.4	1.557302
Oct. 9.23	244 0138.73281	8	W	2 08 53.784 +0.026	+ 0 45 54.59 +0.71	6.4	1.518934
Oct. 11.22	244 0140.72612	9	W	2 07 07.089 +0.004	+ 0 35 02.20 -0.17	6.4	1.515200
1968 Oct. 17.20	244 0146.70585	4	W	2 01 30.643 +0.035	+ 0 04 04.26 +0.09	6.4	1.510345
Oct. 19.19	244 0148.69905	6	W	1 59 34.778 +0.044	- 0 05 31.13 +0.82	6.4	1.510890
Oct. 20.19	244 0149.69565	9	W	1 58 36.438 +0.017	- 0 10 09.76 +0.26	6.4	1.511573
Oct. 21.19	244 0150.69225	9	W	1 57 38.002 +0.042	- 0 14 41.00 -0.13	6.4	1.512531
Oct. 26.17	244 0155.67523	8	W	1 52 46.148 +0.023	- 0 35 11.60 +1.14	6.4	1.521447
1968 Oct. 30.16	244 0159.66167	2	W	1 48 57.632 +0.011	- 0 48 51.36 -0.12	6.4	1.533481
Nov. 5.14	244 0165.64154	8	W	1 43 33.247 +0.020	- 1 04 03.19 +0.08	6.5	1.559451
Nov. 6.13	244 0166.63822	8	W	1 42 42.152 +0.068	- 1 05 55.64 +0.45	6.5	1.564675
Nov. 8.13	244 0168.63161	8	W	1 41 02.812 +0.017	- 1 09 06.70 +0.21	6.5	1.575871
Dec. 5.04	244 0195.54860	8	E	1 27 38.108 -0.005	- 0 35 20.80 +0.05	6.8	1.811351
1968 Dec. 6.04	244 0196.54578	7	E	1 27 30.399 +0.039	- 0 31 30.86 +1.12	6.8	1.822524
Dec. 8.03	244 0198.54020	2	E	1 27 19.739 +0.041	- 0 23 25.57 +0.14	6.8	1.845270
Dec. 9.03	244 0199.53743	2	E	1 27 16.789 +0.016	- 0 19 08.34 +0.32	6.9	1.856836
Dec. 13.02	244 0203.52656	6	E	1 27 20.936 +0.024	- 0 00 31.37 +0.37	6.9	1.904297
Dec. 15.02	244 0205.52123	2	E	1 27 32.388 +0.025	+ 0 09 38.25 +0.55	6.9	1.928694
1968 Dec. 16.01	244 0206.51859	2	E	1 27 40.439 +0.036	+ 0 14 55.59 +0.96	7.0	1.941046
Dec. 17.01	244 0207.51597	2	E	1 27 49.993 +0.018	+ 0 20 19.90 +0.41	7.0	1.953495
Dec. 18.01	244 0208.51337	8	E	1 28 01.085 +0.017	+ 0 25 52.65 +0.50	7.0	1.966038
Dec. 19.01	244 0209.51079	7	E	1 28 13.677 +0.008	+ 0 31 32.71 +0.26	7.0	1.978670
Dec. 20.00	244 0210.50822	2	E	1 28 27.816 +0.052	+ 0 37 20.67 +0.47	7.0	1.991387
1968 Dec. 23.00	244 0213.50062	8	E	1 29 18.844 +0.004	+ 0 55 27.04 +0.72	7.1	2.030011
1969 Dec. 17.37	244 0572.87047	5	W	9 58 44.702 +0.032	+16 10 48.36 -0.46	6.8	1.845832
Dec. 19.36	244 0574.86537	7	W	9 59 15.461 +0.030	+16 15 55.66 -0.03	6.8	1.821604
Dec. 25.34	244 0580.84959	9	W	10 00 08.086 +0.005	+16 35 30.88 -0.04	6.7	1.751800
Dec. 27.34	244 0582.84418	9	W	10 00 11.987 +0.014	+16 43 28.83 +0.10	6.7	1.729597
1969 Dec. 28.34	244 0583.84144	9	W	10 00 11.285 -0.001	+16 47 43.72 -0.14	6.6	1.718713
Dec. 29.33	244 0584.83868	9	W	10 00 08.871 +0.041	+16 52 09.83 +0.08	6.6	1.707981
Dec. 30.33	244 0585.83590	5	W	10 00 04.603 +0.015	+16 56 46.20 -0.18	6.6	1.697404
1970 Jan. 5.31	244 0591.81879	9	W	9 59 01.243 +0.008	+17 28 07.97 +0.47	6.5	1.637468
Jan. 6.31	244 0592.81586	11	W	9 58 44.324 +0.002	+17 33 56.71 -0.12	6.5	1.628111
1970 Jan. 7.31	244 0593.81291	8	W	9 58 25.621 +0.028	+17 39 56.08 +0.09	6.5	1.618946
Jan. 9.30	244 0595.80696	8	W	9 57 42.729 +0.025	+17 52 22.77 -0.10	6.5	1.601216
Jan. 10.30	244 0596.80395	9	W	9 57 18.584 +0.020	+17 58 49.60 -0.48	6.5	1.592659
Jan. 11.30	244 0597.80092	11	W	9 56 52.676 +0.031	+18 05 25.74 -0.35	6.5	1.584314
Jan. 12.29	244 0598.79787	11	W	9 56 24.983 +0.017	+18 12 10.81 +0.26	6.4	1.576185
1970 Jan. 13.29	244 0599.79480	5	W	9 55 55.562 +0.014	+18 19 03.01 -0.13	6.4	1.568275
Jan. 14.29	244 0600.79171	4	W	9 55 24.445 +0.029	+18 26 03.62 +0.12	6.4	1.560589
Jan. 16.28	244 0602.78547	5	W	9 54 17.149 +0.040	+18 40 25.23 -0.82	6.4	1.545901
Jan. 18.27	244 0604.77916	9	W	9 53 03.304 +0.050	+18 55 15.45 +0.21	6.4	1.532150
Jan. 19.27	244 0605.77597	9	W	9 52 23.947 +0.006	+19 02 49.09 +0.28	6.4	1.525634
1970 Jan. 20.27	244 0606.77277	8	W	9 51 43.124 +0.035	+19 10 27.37 -0.44	6.4	1.519362
Jan. 21.26	244 0607.76955	11	W	9 51 00.793 +0.066	+19 18 12.43 +0.63	6.3	1.513337
Jan. 22.26	244 0608.76632	10	W	9 50 16.923 +0.033	+19 25 59.94 -0.39	6.3	1.507563
Jan. 24.25	244 0610.75979	11	W	9 48 45.021 +0.050	+19 41 49.59 +0.50	6.3	1.496777
Jan. 25.25	244 0611.75651	9	W	9 47 57.004 +0.029	+19 49 48.23 -0.09	6.3	1.491772

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Greenwich Date	Julian Date	Ob C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1970 Jan. 27.24	244 0613.74990	5 W	9 46 17.199 +0.038	+20 05 53.85 -0.11	6.3	1.482549
Jan. 29.24	244 0615.74323	5 W	9 44 32.647 +0.032	+20 22 05.39 -0.16	6.3	1.474394
Jan. 30.23	244 0616.73988	4 W	9 43 38.739 +0.023	+20 30 12.23 +0.03	6.3	1.470723
Feb. 2.22	244 0619.72975	9 W	9 40 51.353 +0.044	+20 54 28.89 +0.08	6.3	1.461361
Feb. 3.22	244 0620.72636	10 W	9 39 53.876 +0.043	+21 02 31.63 +0.29	6.3	1.458797
1970 Feb. 4.22	244 0621.72296	8 W	9 38 55.693 +0.048	+21 10 31.29 -0.13	6.2	1.456514
Feb. 7.21	244 0624.71271	11 W	9 35 57.583 +0.002	+21 34 10.68 -0.39	6.2	1.451359
Feb. 8.20	244 0625.70929	9 W	9 34 57.383 +0.039	+21 41 55.23 -0.23	6.2	1.450208
Feb. 9.20	244 0626.70586	9 W	9 33 56.809 +0.007	+21 49 34.05 -0.44	6.2	1.449339
Feb. 10.20	244 0627.70243	9 W	9 32 56.085 +0.030	+21 57 07.61 +0.01	6.2	1.448754
1970 Feb. 11.19	244 0628.69899	4 W	9 31 55.225 +0.039	+22 04 34.17 -0.10	6.2	1.448450
Feb. 20.16	244 0637.66819	8 W	9 22 55.956 +0.030	+23 05 31.59 +0.29	6.2	1.458145
Feb. 21.16	244 0638.66480	10 W	9 21 58.487 +0.039	+23 11 30.76 +0.31	6.2	1.460567
Feb. 22.16	244 0639.66142	11 W	9 21 01.770 +0.031	+23 17 19.14 +0.13	6.2	1.463250
Feb. 26.14	244 0643.64798	5 W	9 17 24.106 +0.017	+23 38 43.11 +0.36	6.3	1.476524
1970 Mar. 6.12	244 0651.62178	10 W	9 11 06.731 +0.040	+24 12 06.91 -0.26	6.3	1.514631
Mar. 9.11	244 0654.61224	10 W	9 09 09.836 +0.008	+24 21 18.00 -0.15	6.3	1.532592
Mar. 11.10	244 0656.60598	7 W	9 08 00.459 +0.022	+24 26 24.61 +0.41	6.3	1.545584
Mar. 13.09	244 0658.59980	7 W	9 06 58.217 +0.023	+24 30 42.28 +0.51	6.4	1.559345
Mar. 14.09	244 0659.59674	5 W	9 06 29.813 -0.004	+24 32 32.38 -0.25	6.4	1.566501
1970 Mar. 15.09	244 0660.59371	4 W	9 06 03.293 -0.008	+24 34 11.50 -0.19	6.4	1.573835
Mar. 18.08	244 0663.58473	11 W	9 04 55.063 +0.012	+24 37 59.47 +0.06	6.4	1.596855
Mar. 19.08	244 0664.58178	11 W	9 04 36.105 +0.003	+24 38 52.61 -0.01	6.4	1.604851
Mar. 20.07	244 0665.57885	11 W	9 04 19.090 +0.021	+24 39 34.96 +0.23	6.4	1.613002
Mar. 22.07	244 0667.57306	9 W	9 03 50.780 +0.022	+24 40 25.98 -0.22	6.5	1.629748
1970 Mar. 23.06	244 0668.57020	4 W	9 03 39.493 +0.010	+24 40 35.55 -0.30	6.5	1.638335
Mar. 25.06	244 0670.56455	4 W	9 03 22.715 +0.017	+24 40 23.90 +0.16	6.5	1.655915
Mar. 29.05	244 0674.55351	7 W	9 03 12.114 +0.036	+24 37 57.81 -0.19	6.5	1.692586
Mar. 30.05	244 0675.55080	7 W	9 03 14.171 +0.008	+24 36 57.28 +0.15	6.5	1.702047
Mar. 31.04	244 0676.54811	11 W	9 03 18.136 +0.008	+24 35 46.80 +0.04	6.6	1.711616
1970 Apr. 1.04	244 0677.54545	0 W	9 03 23.947 -0.010	+24 34 27.31 +0.26	6.6	1.721291
Apr. 2.04	244 0678.54281	0 W	9 03 31.673 +0.028	+24 32 58.04 -0.08	6.6	1.731068
Apr. 3.03	244 0679.54019	11 W	9 03 41.199 +0.026	+24 31 20.04 -0.02	6.6	1.740942
Apr. 5.03	244 0681.53501	8 W	9 04 05.726 +0.025	+24 27 36.72 -0.33	6.6	1.760967
Apr. 6.03	244 0682.53245	8 W	9 04 20.701 +0.024	+24 25 32.35 +0.04	6.6	1.771110
1970 Apr. 9.02	244 0685.52490	5 W	9 05 16.296 +0.034	+24 18 26.71 +0.03	6.7	1.802011
Apr. 10.02	244 0686.52243	4 W	9 05 38.261 -0.012	+24 15 47.88 -0.26	6.7	1.812455
Apr. 11.01	244 0687.51997	7 W	9 06 02.000 +0.004	+24 13 01.09 -0.38	6.7	1.822966
Apr. 13.01	244 0689.51512	5 W	9 06 54.463 +0.012	+24 07 04.17 -0.19	6.7	1.844169
Apr. 14.01	244 0690.51272	8 W	9 07 23.110 -0.020	+24 03 53.54 -0.62	6.7	1.854855
1970 Apr. 16.00	244 0692.50797	11 W	9 08 25.264 -0.015	+23 57 11.28 +0.21	6.7	1.876379
Apr. 19.00	244 0695.50099	11 W	9 10 10.069 +0.003	+23 46 11.82 +0.45	6.8	1.908999
Apr. 20.99	244 0697.49642	4 W	9 11 27.378 +0.040	+23 38 15.69 -0.29	6.8	1.930936
Apr. 21.99	244 0698.49416	5 W	9 12 08.126 +0.003	+23 34 07.63 -0.27	6.8	1.941954
Apr. 26.98	244 0703.48310	7 W	9 15 52.609 -0.016	+23 11 46.44 -0.30	6.9	1.997438
1970 Apr. 27.98	244 0704.48094	8 W	9 16 41.482 +0.008	+23 06 58.90 -0.01	6.9	2.008599
Apr. 30.97	244 0707.47452	9 W	9 19 15.486 -0.007	+22 51 57.63 +0.29	6.9	2.042169
May 1.97	244 0708.47241	11 W	9 20 09.245 -0.011	+22 46 44.77 +0.53	6.9	2.053380
May 3.96	244 0710.46823	8 W	9 22 00.295 -0.012	+22 35 59.11 -0.34	6.9	2.075821
May 6.96	244 0713.46206	5 W	9 24 55.381 -0.007	+22 19 06.77 +0.25	7.0	2.109489
1970 May 7.95	244 0714.46003	7 W	9 25 55.916 -0.014	+22 13 17.07 +0.13	7.0	2.120704
May 8.95	244 0715.45801	7 W	9 26 57.544 +0.018	+22 07 21.45 -0.04	7.0	2.131912
May 10.95	244 0717.45401	9 W	9 29 03.809 +0.034	+21 55 12.58 -0.74	7.0	2.154296
May 11.95	244 0718.45202	8 W	9 30 08.357 -0.020	+21 49 01.24 +0.54	7.0	2.165469
May 12.94	244 0719.45005	10 W	9 31 13.925 -0.019	+21 42 42.40 -0.07	7.0	2.176626
1970 May 13.94	244 0720.44809	11 W	9 32 20.477 +0.027	+21 36 19.07 +0.38	7.0	2.187766
May 14.94	244 0721.44613	8 W	9 33 27.847 -0.019	+21 29 48.84 -0.57	7.1	2.198888
May 15.94	244 0722.44419	10 W	9 34 36.160 -0.020	+21 23 14.10 -0.57	7.1	2.209989
May 19.93	244 0726.43652	7 W	9 39 18.034 +0.021	+20 56 01.53 -0.52	7.1	2.254160
May 20.93	244 0727.43463	7 W	9 40 30.549 +0.025	+20 49 01.05 +0.35	7.1	2.265138
1970 May 22.93	244 0729.43087	4 W	9 42 57.887 -0.000	+20 34 41.53 -0.94	7.1	2.287011
May 23.92	244 0730.42900	5 W	9 44 12.714 +0.009	+20 27 25.62 -0.07	7.1	2.297903
May 26.92	244 0733.42345	8 W	9 48 01.575 +0.063	+20 05 05.25 +0.18	7.2	2.330389
May 29.91	244 0736.41798	8 W	9 51 56.546 +0.010	+19 41 59.69 +0.21	7.2	2.362565
May 30.91	244 0737.41616	10 W	9 53 16.219 +0.013	+19 34 07.59 -0.10	7.2	2.373216
1970 June 1.91	244 0739.41257	10 W	9 55 57.477 +0.006	+19 18 09.08 -0.29	7.2	2.394397
1971 Apr. 18.45	244 1059.95090	14 E	19 54 53.735 +0.078	-18 44 24.23 -0.10	6.6	1.899274
Apr. 23.44	244 1064.94179	7 E	20 01 27.168 +0.050	-18 35 49.63 +0.16	6.5	1.843190
Apr. 24.43	244 1065.93992	4 E	20 02 42.488 +0.007	-18 34 14.81 +0.10	6.5	1.832010
Apr. 25.43	244 1066.93805	7 E	20 03 56.730 +0.027	-18 32 43.02 +0.11	6.5	1.820847
1971 Apr. 27.43	244 1068.93426	15 E	20 06 21.703 +0.057	-18 29 49.71 -0.06	6.4	1.798578
Apr. 28.43	244 1069.93235	12 E	20 07 32.339 +0.009	-18 28 28.82 -0.48	6.4	1.787478
Apr. 30.42	244 1071.92848	15 E	20 09 50.107 +0.053	-18 25 57.70 -0.17	6.4	1.765353
May 2.42	244 1073.92455	14 E	20 12 02.810 +0.011	-18 23 43.47 +0.17	6.4	1.743344
May 5.41	244 1076.91855	11 E	20 15 12.366 +0.050	-18 20 57.20 +0.27	6.3	1.710579

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Greenwich Date	Julian Date	Ob	C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1971 May 6.41	244 1077.91651	7	E	20 16 12.917 +0.054	-18 20 11.73 +0.28	6.3	1.699731
May 8.41	244 1079.91240	11	E	20 18 09.969 +0.047	-18 18 57.08 -0.04	6.3	1.678155
May 9.40	244 1080.91033	4	E	20 19 06.435 +0.035	-18 18 27.46 +0.41	6.3	1.667432
May 11.40	244 1082.90612	12	E	20 20 55.194 +0.032	-18 17 47.46 -0.31	6.3	1.646122
May 12.40	244 1083.90399	13	E	20 21 47.451 +0.043	-18 17 35.48 +0.48	6.2	1.635539
1971 May 14.39	244 1085.89969	8	E	20 23 27.554 +0.037	-18 17 33.04 -0.12	6.2	1.614529
May 15.39	244 1086.89751	8	E	20 24 15.361 +0.027	-18 17 41.55 -0.09	6.2	1.604106
May 19.38	244 1090.88862	11	E	20 27 11.167 +0.037	-18 19 26.94 +0.18	6.2	1.563010
May 20.38	244 1091.88635	13	E	20 27 51.130 +0.036	-18 20 12.51 -0.20	6.1	1.552898
May 21.38	244 1092.88406	4	E	20 28 29.468 +0.046	-18 21 05.30 +0.07	6.1	1.542858
1971 May 25.37	244 1096.87471	8	E	20 30 46.028 +0.056	-18 25 59.53 +0.06	6.1	1.503464
May 26.37	244 1097.87233	15	E	20 31 15.879 +0.055	-18 27 33.80 +0.64	6.1	1.493824
May 27.36	244 1098.86992	12	E	20 31 43.991 +0.066	-18 29 17.31 +0.79	6.0	1.484273
May 28.36	244 1099.86750	8	E	20 32 10.320 +0.062	-18 31 10.11 +0.56	6.0	1.474815
May 29.36	244 1100.86505	15	E	20 32 34.861 +0.055	-18 33 12.17 +0.11	6.0	1.465453
1971 May 30.36	244 1101.86258	8	E	20 32 57.625 +0.067	-18 35 23.18 -0.19	6.0	1.456190
May 31.35	244 1102.86009	8	E	20 33 18.533 +0.038	-18 37 42.53 +0.37	6.0	1.447028
June 1.35	244 1103.85758	11	E	20 33 37.653 +0.045	-18 40 11.31 +0.78	6.0	1.437971
June 2.35	244 1104.85505	13	E	20 33 54.894 +0.013	-18 42 50.22 +0.41	6.0	1.429023
June 4.34	244 1106.84992	7	E	20 34 23.955 +0.080	-18 48 36.00 +0.00	5.9	1.411460
1971 June 5.34	244 1107.84733	4	E	20 34 35.595 +0.032	-18 51 42.62 +0.33	5.9	1.402853
June 7.34	244 1109.84207	7	E	20 34 53.312 +0.030	-18 58 24.98 +0.60	5.9	1.386001
June 8.33	244 1110.83941	15	E	20 34 59.319 +0.031	-19 02 01.13 +0.21	5.9	1.377763
June 10.33	244 1112.83402	8	E	20 35 05.551 +0.013	-19 09 41.69 +0.19	5.9	1.361677
June 11.33	244 1113.83129	15	E	20 35 05.805 +0.041	-19 13 46.64 +0.05	5.9	1.353835
1971 June 12.32	244 1114.82854	12	W	20 35 04.090 +0.052	-19 18 01.36 -0.20	5.8	1.346133
June 14.32	244 1116.82298	15	W	20 34 54.788 +0.085	-19 26 58.79 +0.25	5.8	1.331158
June 15.31	244 1117.82016	4	W	20 34 47.132 +0.055	-19 31 42.34 -0.02	5.8	1.323893
June 16.31	244 1118.81732	11	W	20 34 37.540 +0.059	-19 36 35.06 +0.00	5.8	1.316781
June 17.31	244 1119.81445	7	W	20 34 25.981 +0.067	-19 41 37.24 -0.08	5.8	1.309827
1971 June 18.31	244 1120.81157	4	W	20 34 12.476 +0.096	-19 46 47.87 +0.64	5.8	1.303034
June 23.29	244 1125.79680	8	W	20 32 35.609 +0.094	-20 14 58.45 -0.06	5.7	1.271628
July 1.27	244 1133.77205	4	W	20 28 24.326 +0.095	-21 06 44.25 +0.36	5.7	1.231157
July 3.26	244 1135.76567	7	W	20 27 04.586 +0.072	-21 20 41.96 +0.18	5.7	1.223085
July 6.25	244 1138.75597	8	W	20 24 53.799 +0.073	-21 42 11.67 -0.25	5.6	1.212602
1971 July 7.25	244 1139.75270	15	W	20 24 07.391 +0.048	-21 49 28.60 -0.31	5.6	1.209551
July 8.24	244 1140.74942	12	W	20 23 19.756 +0.092	-21 56 47.60 +0.39	5.6	1.206725
July 9.24	244 1141.74613	8	W	20 22 30.765 +0.030	-22 03 00.00 +0.00	5.6	1.204127
July 10.24	244 1142.74282	15	W	20 21 40.723 +0.094	-22 11 33.88 +0.21	5.6	1.201758
July 12.23	244 1144.73616	8	W	20 19 57.136 +0.038	-22 26 26.03 -0.03	5.6	1.197718
1971 July 13.23	244 1145.73282	7	W	20 19 03.870 +0.054	-22 33 53.02 -0.08	5.6	1.196051
July 14.22	244 1146.72946	4	W	20 18 09.696 +0.074	-22 41 20.16 -0.27	5.6	1.194622
July 15.22	244 1147.72610	11	W	20 17 14.656 +0.069	-22 48 45.93 +0.41	5.6	1.193433
July 16.22	244 1148.72272	7	W	20 16 18.889 +0.091	-22 56 12.14 -0.33	5.6	1.192485
July 22.20	244 1154.70235	8	W	20 10 32.964 +0.059	-23 39 56.83 +0.15	5.6	1.191954
1971 July 23.19	244 1155.69894	15	W	20 09 34.299 +0.065	-23 47 01.98 +0.10	5.6	1.192733
July 24.19	244 1156.69553	8	W	20 08 35.562 +0.047	-23 54 02.25 +0.11	5.6	1.193760
July 26.18	244 1158.68872	14	W	20 06 38.436 +0.107	-24 07 47.09 -0.31	5.6	1.196559
Aug. 6.15	244 1169.65166	8	W	19 56 29.818 +0.032	-25 15 00.00 +0.05	5.7	1.229334
Aug. 7.14	244 1170.64835	15	W	19 55 39.850 +0.057	-25 20 18.14 -0.70	5.7	1.233725
1971 Aug. 9.14	244 1172.64178	13	W	19 54 03.509 +0.050	-25 30 24.85 +0.33	5.7	1.243182
Aug. 10.13	244 1173.63851	7	W	19 53 17.302 +0.056	-25 35 15.42 -0.10	5.7	1.248245
Aug. 11.13	244 1174.63527	4	W	19 52 32.482 +0.062	-25 39 56.66 -0.50	5.7	1.253527
Aug. 14.12	244 1177.62563	13	W	19 50 26.870 +0.017	-25 53 02.43 -0.06	5.8	1.270667
Aug. 16.11	244 1179.61929	7	W	19 49 11.153 +0.035	-26 00 59.67 -0.44	5.8	1.283147
1971 Aug. 17.11	244 1180.61615	15	W	19 48 35.856 +0.063	-26 04 43.53 -0.10	5.8	1.289695
Aug. 18.11	244 1181.61304	12	W	19 48 02.290 +0.070	-26 08 17.96 +0.18	5.8	1.296445
Aug. 19.10	244 1182.60994	8	W	19 47 30.466 +0.030	-26 11 43.94 -0.57	5.8	1.303392
Aug. 22.10	244 1185.60077	13	W	19 46 06.272 +0.046	-26 21 02.13 +0.37	5.9	1.325387
Aug. 23.09	244 1186.59776	13	W	19 45 42.013 +0.041	-26 23 50.28 -0.11	5.9	1.333092
1971 Aug. 24.09	244 1187.59478	11	W	19 45 19.752 +0.076	-26 26 29.29 -0.72	5.9	1.340977
Aug. 25.09	244 1188.59181	11	W	19 44 59.405 +0.055	-26 28 57.87 -0.09	5.9	1.349039
Aug. 26.08	244 1189.58887	13	W	19 44 41.053 +0.035	-26 31 18.03 -0.14	5.9	1.357274
Aug. 27.08	244 1190.58595	11	W	19 44 24.751 +0.052	-26 33 29.42 -0.41	5.9	1.365678
Aug. 28.08	244 1191.58306	13	W	19 44 10.482 +0.079	-26 35 31.36 -0.12	5.9	1.374247
1971 Aug. 29.07	244 1192.58018	4	W	19 43 58.149 +0.023	-26 37 24.92 -0.22	6.0	1.382978
Sept. 1.07	244 1195.57171	15	W	19 43 33.544 +0.027	-26 42 13.73 -0.12	6.0	1.410103
Sept. 2.06	244 1196.56893	8	W	19 43 29.375 +0.005	-26 43 33.30 -0.12	6.0	1.419444
Sept. 4.06	244 1198.56344	15	W	19 43 27.156 +0.024	-26 45 47.70 +0.18	6.0	1.438552
Sept. 6.05	244 1200.55805	14	W	19 43 32.949 +0.059	-26 47 30.85 -0.08	6.1	1.458209
1971 Sept. 7.05	244 1201.55539	4	W	19 43 38.796 +0.058	-26 48 10.76 -0.21	6.1	1.468235
Sept. 8.05	244 1202.55275	4	W	19 43 46.589 +0.035	-26 48 43.08 -0.41	6.1	1.478389
Sept. 9.04	244 1203.55013	11	W	19 43 56.376 +0.043	-26 49 07.09 +0.14	6.1	1.488668
Sept. 11.04	244 1205.54496	13	W	19 44 21.712 -0.001	-26 49 34.42 -0.34	6.2	1.509591
Sept. 12.04	244 1206.54241	13	W	19 44 37.303 +0.010	-26 49 36.78 -0.22	6.2	1.520229

4 VESTA

Greenwich Date	Julian Date	Ob	C	Right Ascension (O-C)	Declination (O-C)	Mag	Distance
1971 Sept. 13.03	244 1207.53988	13	W	19 44 54.821 +0.040	-26 49 31.61 +0.26	6.2	1.530981
Sept. 14.03	244 1208.53737	8	W	19 45 14.159 +0.010	-26 49 20.22 -0.16	6.2	1.541843
Sept. 15.03	244 1209.53489	15	W	19 45 35.391 -0.000	-26 49 00.89 +0.32	6.2	1.552813
Sept. 16.03	244 1210.53243	12	W	19 45 58.520 +0.026	-26 48 35.80 -0.41	6.2	1.563888
Sept. 17.02	244 1211.52998	8	W	19 46 23.474 +0.044	-26 48 02.53 +0.13	6.3	1.575064
1971 Sept. 18.02	244 1212.52756	15	W	19 46 50.212 +0.030	-26 47 22.39 +0.71	6.3	1.586339
Sept. 20.02	244 1214.52278	13	W	19 47 49.072 +0.008	-26 45 43.69 -0.06	6.3	1.609170
Sept. 21.01	244 1215.52042	7	W	19 48 21.165 +0.012	-26 44 44.61 -0.76	6.3	1.620721
Sept. 22.01	244 1216.51808	14	W	19 48 54.984 +0.007	-26 43 37.53 -0.04	6.3	1.632357
Sept. 23.01	244 1217.51576	11	W	19 49 30.522 +0.009	-26 42 23.96 +0.62	6.4	1.644077
1971 Sept. 24.01	244 1218.51346	7	W	19 50 07.761 +0.024	-26 41 05.14 +0.07	6.4	1.655875
Sept. 25.01	244 1219.51118	14	W	19 50 46.667 +0.041	-26 39 39.37 +0.07	6.4	1.667751
Sept. 27.00	244 1221.50667	11	W	19 52 09.302 +0.025	-26 36 28.95 +0.01	6.4	1.691720
Sept. 28.00	244 1222.50445	15	W	19 52 53.005 +0.018	-26 34 44.27 +0.09	6.4	1.703808
Sept. 29.99	244 1224.50005	8	W	19 54 25.050 +0.022	-26 30 56.85 -0.05	6.5	1.728178
1971 Oct. 1.99	244 1226.49572	12	W	19 56 03.061 +0.037	-26 26 45.11 -0.04	6.5	1.752787
Oct. 8.98	244 1233.48107	14	W	20 02 29.788 -0.000	-26 08 57.88 -0.29	6.6	1.840567
Oct. 10.97	244 1235.47702	13	W	20 04 32.003 +0.014	-26 02 59.97 +0.40	6.6	1.866054
Oct. 11.97	244 1236.47501	8	W	20 05 34.916 -0.001	-25 59 52.16 +0.99	6.7	1.878855
Oct. 13.97	244 1238.47105	15	W	20 07 44.355 +0.028	-25 53 21.05 +0.47	6.7	1.904564
1971 Oct. 14.96	244 1239.46908	8	W	20 08 50.800 +0.039	-25 49 57.22 -0.10	6.7	1.917467
Oct. 15.96	244 1240.46713	12	W	20 09 58.323 +0.007	-25 46 27.44 -0.43	6.7	1.930399
Oct. 18.96	244 1243.46136	13	W	20 13 27.523 -0.001	-25 35 22.24 +0.20	6.8	1.969351
1972 Sept. 7.43	244 1567.93059	7	E	4 48 23.505 +0.030	+15 55 23.73 +0.59	7.4	2.302919
Sept. 12.41	244 1572.91977	15	E	4 52 28.909 +0.030	+15 57 05.71 -0.05	7.3	2.240516
1972 Sept. 14.41	244 1574.91535	8	E	4 53 58.677 -0.000	+15 57 25.70 +0.77	7.3	2.215630
Sept. 15.41	244 1575.91311	15	E	4 54 41.754 +0.043	+15 57 30.09 -0.00	7.3	2.203215
Sept. 16.41	244 1576.91086	12	E	4 55 23.481 +0.010	+15 57 32.62 +0.23	7.2	2.190821
Sept. 20.40	244 1580.90172	11	E	4 57 57.417 -0.002	+15 57 14.51 +0.34	7.2	2.141519
Sept. 21.39	244 1581.89940	11	E	4 58 32.575 +0.039	+15 57 02.81 -0.23	7.2	2.129276
1972 Sept. 27.38	244 1587.88510	8	E	5 01 33.439 +0.013	+15 55 05.48 +0.15	7.1	2.056715
Oct. 4.36	244 1594.86763	4	E	5 03 55.285 +0.053	+15 51 12.39 +0.01	7.0	1.974674
Oct. 5.36	244 1595.86505	11	E	5 04 08.991 +0.009	+15 50 32.24 +0.27	7.0	1.963252
Oct. 8.35	244 1598.85722	16	E	5 04 40.121 +0.034	+15 48 21.85 +0.12	7.0	1.929524
Oct. 13.34	244 1603.84377	8	E	5 04 57.310 +0.057	+15 44 19.46 -0.20	6.9	1.875360
1972 Oct. 15.33	244 1605.83824	12	E	5 04 51.740 +0.035	+15 42 35.40 -0.58	6.9	1.854512
Oct. 16.33	244 1606.83545	12	E	5 04 46.262 +0.028	+15 41 42.54 -0.43	6.9	1.844281
Oct. 20.32	244 1610.82407	11	E	5 04 06.318 +0.075	+15 38 04.66 +0.04	6.8	1.804736
Oct. 21.32	244 1611.82117	4	E	5 03 51.748 +0.047	+15 37 09.18 +0.41	6.8	1.795215
Oct. 22.31	244 1612.81825	11	E	5 03 35.397 +0.053	+15 36 12.68 +0.13	6.8	1.785850
1972 Oct. 23.31	244 1613.81531	11	E	5 03 17.207 +0.037	+15 35 16.09 +0.06	6.8	1.776643
Oct. 28.29	244 1618.80029	12	E	5 01 19.096 +0.010	+15 30 31.27 -0.56	6.7	1.733146
Nov. 2.28	244 1623.78476	11	E	4 58 36.221 +0.036	+15 25 51.28 -0.25	6.7	1.694310
Nov. 4.27	244 1625.77841	7	E	4 57 18.985 +0.055	+15 24 02.65 +0.01	6.7	1.680218
Nov. 5.27	244 1626.77520	4	E	4 56 37.875 +0.056	+15 23 09.19 -0.03	6.7	1.673499
1972 Nov. 8.26	244 1629.76548	8	E	4 54 24.969 +0.012	+15 20 34.56 +0.39	6.6	1.654711
Nov. 14.24	244 1635.74558	7	E	4 49 20.173 +0.030	+15 15 55.58 +0.46	6.6	1.623650
Nov. 15.24	244 1636.74221	11	E	4 48 24.884 +0.039	+15 15 13.90 +0.35	6.6	1.619361
Nov. 17.23	244 1638.73543	7	E	4 46 30.944 +0.043	+15 13 55.53 +0.22	6.6	1.611570
Nov. 18.23	244 1639.73203	11	E	4 45 32.445 +0.064	+15 13 18.92 +0.14	6.6	1.608075
1972 Nov. 23.21	244 1644.71485	12	E	4 40 26.920 +0.063	+15 10 46.40 +0.48	6.6	1.594683
Nov. 26.20	244 1647.70445	15	E	4 37 15.583 +0.028	+15 09 41.87 +0.55	6.6	1.589992
Nov. 30.19	244 1651.69052	7	E	4 32 55.202 +0.037	+15 08 52.23 +0.29	6.6	1.587739
Dec. 1.18	244 1652.68704	4	E	4 31 49.712 +0.067	+15 08 47.32 +0.45	6.6	1.587898
Dec. 4.17	244 1655.67658	4	E	4 28 33.440 +0.076	+15 08 50.62 -0.24	6.6	1.590119
1972 Dec. 5.17	244 1656.67310	15	E	4 27 28.391 +0.087	+15 08 59.24 +0.29	6.6	1.591439
Dec. 6.16	244 1657.66962	7	E	4 26 23.612 +0.052	+15 09 10.59 -0.02	6.6	1.593049
Dec. 13.14	244 1664.64545	4	E	4 19 05.810 +0.061	+15 12 19.90 +0.44	6.6	1.612308
Dec. 15.13	244 1666.63863	7	E	4 17 07.837 +0.034	+15 13 50.37 +0.16	6.6	1.620317
Dec. 17.13	244 1668.63186	16	E	4 15 14.058 +0.039	+15 16 10.35 +2.02	6.6	1.629400
1972 Dec. 20.12	244 1671.62180	8	E	4 12 32.190 +0.046	+15 18 54.36 +0.12	6.6	1.644982
Dec. 30.08	244 1681.58931	11	E	4 05 03.478 +0.046	+15 34 53.40 +0.35	6.7	1.712775
1973 Jan. 3.07	244 1685.57684	12	E	4 02 49.022 +0.010	+15 43 32.42 +0.02	6.8	1.746124
Jan. 4.07	244 1686.57377	8	E	4 02 19.743 -0.034	+15 45 54.40 -0.06	6.8	1.754964
Jan. 7.06	244 1689.56469	8	E	4 01 02.833 -0.007	+15 53 29.70 +0.19	6.8	1.782615
1973 Jan. 11.05	244 1693.55288	16	E	3 59 45.771 +0.035	+16 04 41.37 -0.58	6.9	1.821938
Jan. 12.04	244 1694.54998	16	E	3 59 31.104 +0.058	+16 07 41.84 +0.43	6.9	1.832174
Jan. 14.04	244 1696.54425	11	E	3 59 07.172 +0.005	+16 13 54.35 +0.83	6.9	1.853096
Jan. 15.04	244 1697.54141	11	E	3 58 58.013 +0.038	+16 17 06.01 -0.03	6.9	1.863773
Jan. 17.03	244 1699.53580	8	E	3 58 45.026 -0.001	+16 23 43.74 +0.06	6.9	1.885535
1973 Jan. 19.02	244 1701.53027	12	E	3 58 39.287 +0.027	+16 30 37.74 +0.19	7.0	1.907813
Jan. 26.01	244 1708.51156	11	E	3 59 14.292 +0.004	+16 56 43.63 +0.17	7.0	1.989374
Jan. 30.00	244 1712.50131	7	E	4 00 11.864 +0.042	+17 12	7.1	2.038110

**CATALOG OF 23,001 STARS
FROM OBSERVATIONS IN THE YEARS 1967-1973
REDUCED WITHOUT PROPER MOTION TO B1950.0**

EXPLANATION

The construction of the catalog is described in the text. The positions are for the epoch of observation referred to the equinox and equator of B1950.0. An explanation of each column is given below.

- Col. 1—Catalog number in right ascension order. A footnote symbol may follow. A small letter indicates that the observed component precedes or follows (*p* or *f*), or is to the north or south (*n* or *s*). If the components are not separable in a small telescope, or there are special circumstances, an asterisk is the footnote symbol. Footnotes give the magnitudes, separations, and position angles of the components. The letter A followed by a number indicates that the star is in Aitken's Double Star Catalog, and the letters SDS indicate that the star is in Innes' Double Star Catalog. Stars observed at lower transit have the letters SP after the catalog number which is the same as the above pole number.
- Col. 2—The Durchmusterung number. All stars whose declination degree numbers are north of -22° have the Bonn number. If the star is in the -22° band it has the Bonn number if it exists. Otherwise, the Cordoba number is used. Cordoba numbers are used from -23° to -51° , inclusive. Cape numbers are used from -52° to the south pole. This convention is that used by the Henry Draper, FK5, and other catalogs. Stars with no DM number have this column blank.
- Col. 3—Visual magnitude. Variable stars have the letter *v* in the third column, preceded by the brightest magnitude. The range of variability is shown in a footnote. Negative magnitudes are shown by an asterisk and a footnote.
- Col. 4—Spectrum on the Henry Draper system. Variable and composite spectra are indicated by an asterisk and a footnote. If no spectrum is available, two dashes are printed.
- Col. 5—Right Ascension 1950.0 (hours, minutes, seconds).
- Col. 6—Mean error of the mean times the cosine of the declination (seconds of arc). Dashes if only one observation.
- Col. 7—Number of right ascension observations.
- Col. 8—Mean epoch of right ascension observations.
- Col. 9—Declination 1950.0 (degrees, minutes, seconds). If the star was observed only in right ascension, an approximate catalog position appears in column 9 with columns 10, 11, and 12 blank.
- Col. 10—Mean error of the mean (seconds of arc). Dashes if only one observation.
- Col. 11—Number of declination observations.
- Col. 12—Mean epoch of declination observations.
- Col. 13—FK4 or FK4 Sup catalog number.
- Col. 14—GC catalog number.
- Col. 15—N30 catalog number.
- Col. 16—Number used during the observing program. The star categories (see page 161) are numbered as follows: 2 and 3. Southern Reference Stars (SRS) {Four sections: (Cape Photographic Zone -40° to -52° , 1 to 2871; La Plata PZT -34° , 18442 to 18457; South Polar Zone -64° to -90° , 18458 to 20495; all other SRS, 2872 to 18441)}. 4. Scorpio-Centaurus Association {21001 to 21165}. 5. FK4 and FK4 Sup {Numeral 3, numeral 5 (subpole), 6 (azimuth star), 7 (subpole azimuth star), or 8 (clock star) precedes the FK4 or FK4 Sup catalog number}. 6. G. van Herk double star {25057 to 28507}, and stars near the Trapezium {24117 to 24134}.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
1	-16	6407	9.0	G0	0 00 00.444	0.14	2	72.243	-16 06 34.75	0.01	2	72.243				2872
2	-44	15432	8.3	K0	00 01.319	0.17	4	70.246	-44 13 34.82	0.24	4	70.246				1
3	-68	3595	9.4	G5	00 03.010	0.31	4	69.911	-67 54 45.75	0.05	3	69.606				18458
4	-58	8126	8.65	K0	00 10.010	0.25	4	70.180	-57 54 43.34	0.15	4	70.180				2873
5	-41	15387	8.5	K0	00 13.299	0.08	4	70.505	-41 15 41.43	0.09	4	70.505		5		2
6	+ 3	4924	8.9	K0	0 00 13.305	--	1	71.574	+ 3 34 54.71	--	1	71.574				2874
7	- 1	4520	8.0	K0	00 23.258	--	1	72.798	- 1 10 19.90	--	1	72.798				2875
8	-40	15315	9.1	G5	00 23.891	0.09	5	70.853	-39 48 19.99	0.11	5	70.853				3
9	-61	6792	7.88	K0	00 27.984	0.24	4	69.992	-60 58 13.28	0.34	4	69.992		9		2876
10	-25	16764	8.4	K2	00 32.631	0.23	5	71.289	-25 32 21.83	0.20	5	71.289				2877
11	-24	17962	8.7	F5	0 00 43.394	0.10	4	70.424	-23 53 36.67	0.22	4	70.424				2878
12	-65	4195	9.0	K2	00 47.992	0.17	4	70.742	-64 45 16.43	0.18	4	70.742				18459
13	-36	16149	9.2	A0	00 51.309	0.17	5	71.227	-36 14 37.07	0.14	5	71.227				2880
14	-27	16528	8.2	G5	00 51.857	0.09	4	70.411	-26 41 36.94	0.20	4	70.411				2881
15	-66	3822	9.0	G5	00 58.428	0.24	2	70.281	-66 06 22.44	0.24	2	70.281				18460
16	-52	12246	8.5	K0	0 01 03.619	0.19	5	71.092	-52 05 15.17	0.17	5	71.092				2883
17	+ 3	4926	8.16	F0	01 06.360	--	1	72.771	+ 3 37 43.76	--	1	72.771			1	2884
18	-18	6417	4.62	A0	01 10.794	0.02	88	70.825	-17 36 51.54	0.03	84	70.828	905	23	2	80905
19	-64	4396	8.5	F5	01 11.765	0.15	4	70.255	-63 52 44.78	0.13	4	70.255				2885
20	-45	15227	8.0	A3	01 23.616	0.08	4	70.166	-45 34 01.16	0.20	4	70.166				4
21p	-48	14684	7.9	F0	0 01 24.927	0.12	4	70.475	-48 24 13.30	0.09	4	70.475				5
22	-35	16055	8.4	G0	01 41.322	0.29	4	70.685	-34 41 34.59	0.15	4	70.685				2886
23	-18	6419	8.8	A0	01 41.636	--	1	70.910	-17 42 11.27	--	1	70.910				2887
24	-23	18133	8.9	K0	01 45.215	0.09	4	70.491	-23 31 56.51	0.17	4	70.491				2888
25	-17	6868	5.80	K0	01 46.207	--	1	70.923	-16 48 24.47	--	1	70.923		33		2889
26	-54	10426	8.8	K0	0 01 48.391	0.16	4	71.439	-54 11 16.95	0.14	4	71.439				2890
27	-11	6194	5.16	K2	01 56.539	0.13	6	69.853	-10 47 16.17	0.08	6	69.853	2001	36		32001
28	- 7	6142	8.4	G0	01 56.562	0.45	2	71.220	- 7 14 36.71	0.36	2	71.220				2891
29	-73	2346	7.43	F5	01 59.827	0.10	4	69.988	-73 10 31.47	0.14	4	69.988		37		18461
30	-20	6709	8.7	K2	02 02.744	0.32	2	72.351	-19 42 58.11	0.02	2	72.351				2892
31	-31	19584	8.8	K0	0 02 03.407	0.11	4	70.418	-31 26 50.75	0.08	4	70.418				2893
32	-77	1600	8.9	G5	02 03.593	0.14	4	69.430	-76 37 30.45	0.05	4	69.430				18462
32 SP					02 03.445	0.13	4	69.806	-76 37 30.12	0.14	4	69.806				18462
33	+ 2	4749	8.9	K2	02 03.599	--	1	72.553	+ 2 39 32.43	--	1	72.553				2894
34	-72	2799	8.8	G5	02 04.588	0.19	4	70.070	-71 58 24.36	0.14	4	70.070				18463
35	-52	12249	7.30	K0	0 02 05.700	0.14	4	70.485	-51 51 42.76	0.18	4	70.485		40		2895
36	- 8	6240	8.6	K2	02 06.210	0.22	2	72.158	- 8 27 47.76	0.60	2	72.158				2896
37	-29	18953	8.4	K0	02 07.787	0.19	4	70.321	-29 07 49.68	0.17	4	70.321				2897
38	-72	2800	5.64	B9	02 10.333	0.05	43	71.121	-71 42 54.74	0.05	43	71.121	1001	42	4	31001
38 SP					02 10.322	0.07	63	71.184	-71 42 55.19	0.12	62	71.165	1001	42	4	51001
39	-33	16834	9.0	F2	0 02 12.064	0.23	3	69.740	-32 38 21.75	0.16	3	69.740				2898
40	+ 0	5084	8.4	A5	02 12.534	--	1	71.888	+ 1 15 30.96	--	1	71.888				2899
41	+26	4744	6.57	G5	02 26.675	0.09	6	70.209	+27 23 47.42	0.10	6	70.209	2003	48	6	32003
42	-60	7716	8.6	G5	02 31.141	0.14	4	70.029	-60 06 23.21	0.40	4	70.029				2900
43	+ 2	4750	8.9	K0	02 41.003	--	1	72.798	+ 2 43 44.50	--	1	72.798				2901
44	- 6	6357	4.68	K0	0 02 46.524	0.08	13	71.171	- 5 59 12.24	0.07	12	71.115	1002	59	8	31002
45	-22	6257	8.3	A0	02 46.769	0.04	4	69.924	-21 35 36.96	0.10	4	69.924				2902
46	-34	16293	9.1	G5	02 49.681	0.11	4	70.004	-33 46 40.52	0.10	4	70.004				2903
47	- 4	6019	7.8	K0	02 51.787	--	1	72.790	- 4 07 47.44	--	1	72.790				2904
48	-15	6539	8.2	K0	02 52.920	--	1	72.624	-14 42 01.10	--	1	72.624				2905
49	- 8	6242	7.20	K5	0 02 54.608	--	1	72.730	- 7 56 36.81	--	1	72.730		65		2906
50	-37	15500	7.65	K2	02 54.789	0.18	3	70.343	-37 34 51.37	0.06	3	70.343		66		2907
51	-43	15584	7.52	M3	02 55.415	0.16	5	71.180	-43 09 56.78	0.10	5	71.180		67		6
52	-10	6227	7.11	F5	02 57.446	0.21	2	72.133	- 9 53 42.57	0.27	2	72.133		69	9	2908
53	-35	16061	9.4	K0	02 59.111	0.17	4	70.909	-35 24 28.94	0.13	4	70.909				2909
54	-48	14688	10.1	K0	0 03 02.581	0.18	4	70.673	-47 50 51.47	0.16	4	70.673				7
55	-62	6468	7.59	G5	03 04.274	0.28	4	69.767	-61 35 18.17	0.18	4	69.767		74		2910
56	-58	8130	9.2	K5	03 07.170	0.15	4	69.976	-58 34 04.48	0.20	4	69.976				2911
57	+12	5063	5.66	K0	03 07.815	0.06	6	70.500	+13 07 04.95	0.16	5	70.236	2004	75		32004
58	-16	6415	8.6	K5	03 09.851	0.05	2	72.507	-15 38 38.04	0.00	2	72.507				2912
59	-15	6542	9.2	G0	0 03 21.426	0.33	2	72.152	-14 42 39.36	0.27	2	72.152				2913
60*	-31	19595	9.0	F8	03 24.047	0.12	4	70.256	-30 36 23.97	0.15	4	70.256				2914
61	-69	3349	9.1	G0	03 24.980	0.11	4	69.762	-69 05 24.53	0.16	4	69.762				18464
62	-39	15253	8.4	K0	03 27.469	0.10	4	70.160	-39 24 56.65	0.29	4	70.160				2915
63	- 0	4619	8.2	G5	03 34.243	0.34	2	71.257	- 0 09 24.37	0.18	2	71.257				2916
64	-29	18964	7.6	A0	0 03 36.067	0.09	4	69.715	-29 25 47.12	0.07	4	69.715				2917
65	-11	6199	7.1	M1	03 43.437	0.06	2	71.210	-11 03 24.35	0.07	2	71.210				2918
66	-84	1	9.0	K5	03 44.234	0.16	5	70.532	-84 22 36.13	0.13	5	70.532				18465
66 SP					03 44.556	0.07	4	70.321	-84 22 35.91	0.07	4	70.321				18465
67	- 2	6099	8.0	K2	03 44.944	0.09	2	72.086	- 1 30 58.57	0.44	2	72.086				2919
68	-18	6426	6.8	F0	0 03 51.657	0.04	2	72.110	-18 18 59.73	0.29	2	72.110				2920
69	-17	6875	9.1	G5	03 53.791	0.05	2	72.191	-17 00 56.98	0.06	2	72.191				2921
70	-53	2	8.9	K0	03 55.720	0.16	4	70.124	-53 12 41.54	0.04	4	70.124				2922
71	-22	6261	9.0	F0	03 58.117	0.08	4	70.423	-21 46 46.80	0.13	4	70.423				2923
72	- 5	6117	8.3	F8	04 13.202	0.01	2	71.826	- 4 37 39.93	0.00	2	71.826				2924

21 SDS, 9.6m, 3"1, 62°.

60 AB 9.7m-9.9m, 0"3, C 10.8m, 5"2, 324°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*	
73	-23	4	6.06	F0	0	04	16.813	0.03	88	71.424	-23 23	07.86	0.03	86	71.436	1003	98	13	31003	
74	-71	1	8.0	K2	04	17.996	0.19	4	68.944	-70 52	04.40	0.24	4	68.944					18466	
75	-55	2	8.70	K0	04	21.909	0.21	3	69.154	-55 26	20.42	0.29	3	69.154			100		2925	
76	-44	5	7.6	G5	04	24.024	0.25	3	69.999	-44 15	49.86	0.03	3	69.999					8	
77	-41	6	9.0	F2	04	27.116	0.12	4	70.209	-40 41	32.60	0.12	4	70.209					9	
78	-16	6419	8.7	F5	0	04	34.192	0.10	2	71.834	-16 07	41.85	0.49	2	71.834					2926
79	-38	7	8.68	F0	04	35.841	0.16	4	70.373	-38 12	26.83	0.10	3	70.229			101		2927	
80	-42	3	7.94	G0	04	43.349	0.06	4	70.179	-42 10	04.81	0.11	4	70.179			102		10	
81	-28	6	8.1	K0	04	43.797	0.21	3	68.767	-27 40	33.20	0.19	3	68.767					2928	
82	-18	6428	6.18	A3	04	45.081	0.11	2	72.097	-17 39	55.49	0.07	2	72.097			103		2929	
83	-26	8	6.89	F5	0	04	49.161	0.16	4	70.031	-25 38	01.83	0.21	4	70.031			105		2930
84	-78	1	8.4	G5	05	00.314	0.06	4	70.140	-77 46	21.27	0.12	4	70.140					18467	
84	SP				05	00.314	0.10	4	70.227	-77 46	21.11	0.26	4	70.227					18467	
85	-63	5	7.55	M0	05	06.374	0.15	4	69.741	-62 35	36.13	0.07	4	69.741			113		2931	
86	-56	13	9.1	K0	05	09.979	0.19	4	69.712	-56 31	40.29	0.20	4	69.712					2932	
87	-47	13	8.5	K0	0	05	10.735	0.13	4	70.211	-46 49	22.57	0.15	4	70.211					11
88	-6	1	8.6	K0	05	14.220	0.12	2	71.224	-5 45	52.06	0.06	2	71.224					2933	
89	-11	2	8.4	G5	05	15.009	0.04	2	71.753	-11 24	26.48	0.10	2	71.753					2934	
90	-5	3	8.9	G0	05	19.252	0.04	2	71.724	-5 07	59.20	0.06	2	71.724			117		2935	
91	-51	12	8.2	K0	05	23.631	0.15	4	69.948	-51 32	09.97	0.10	4	69.948					12	
92	-19	2	8.0	K0	0	05	26.221	0.15	2	72.576	-18 57	46.23	0.20	2	72.576					2936
93	-46	10	8.9	K0	05	30.172	0.11	4	70.425	-45 39	37.14	0.10	4	70.425					13	
94	-86	2	7.37	B9	05	31.001	0.13	4	69.690	-86 19	02.11	0.24	4	69.690			121		18468	
94	SP				05	31.326	0.13	4	70.320	-86 19	01.50	0.30	4	70.320			121		18468	
95	-30	12	8.6	G5	05	32.424	0.18	4	70.254	-29 41	41.25	0.71	4	70.254					2937	
96	-78	2	7.79	K0	0	05	34.996	0.05	4	69.693	-78 29	21.62	0.27	4	69.693			122		18469
96	SP				05	34.900	0.20	4	69.854	-78 29	21.81	0.32	4	69.854			122		18469	
97	-3	3	6.32	K0	05	38.416	0.17	6	70.069	-2 43	33.47	0.16	6	70.069	2006		124	15	32006	
98	-15	7	7.02	G0	05	43.160	0.09	2	71.904	-15 06	09.57	0.07	2	71.904			125		2938	
99	+28	4	2.15	A0p	05	48.048	0.08	12	70.779	+28 48	48.79	0.13	12	70.779	1		127	16	30001	
100	+2	3	8.0	G5	0	05	48.198	--	1	72.558	+3 09	45.86	--	1	72.558					2939
101	-20	4	8.5	K0	05	50.135	--	1	72.523	-19 30	08.55	--	1	72.523					2940	
102	-57	10	8.8	K0	05	54.290	0.13	4	70.165	-57 28	23.98	0.16	4	70.165					2941	
103	-24	14	7.7	F5	05	54.734	0.07	4	70.181	-24 22	19.75	0.12	4	70.181					2942	
104	-54	14	9.1	G5	05	55.875	0.41	4	70.666	-53 43	17.39	0.23	4	70.666					2943	
105	-7	3	7.9	K2	0	05	57.297	0.20	2	71.352	-7 04	14.11	0.48	2	71.352					2944
106	-18	3	6.37	M0	06	00.364	0.15	2	71.848	-17 51	22.00	0.12	2	71.848			129		2945	
107	-3	5	7.31	G5	06	09.347	0.02	2	71.824	-2 30	02.90	0.09	2	71.824			132		2946	
108	-74	7	7.77	K2	06	12.666	0.21	4	70.401	-74 31	00.29	0.10	4	70.401			133		18470	
109p	-53	9	8.4	F0	06	14.010	0.08	4	70.692	-52 36	21.67	0.26	4	70.692					2947	
110	-37	16	8.7	F8	0	06	14.746	0.09	4	70.683	-37 01	19.76	0.16	4	70.683					2948
111	-47	16	7.80	F8	06	16.819	0.09	4	70.962	-47 20	19.56	0.20	4	70.962			137		14	
112	-0	6	7.63	K2	06	18.474	0.28	2	71.270	+0 24	51.15	0.01	2	71.270			140		2949	
113	-36	19	9.2	K0	06	20.817	0.15	4	70.913	-36 05	50.19	0.18	4	70.913					2950	
114	-22	7	7.30	M0	06	20.820	0.14	4	70.108	-22 27	27.98	0.22	4	70.108			141		2951	
115	-26	28	8.5	K0	0	06	22.654	0.08	4	69.992	-26 30	06.59	0.05	4	69.992					2952
116	-25	26	9.0	F2	06	30.106	0.25	2	71.090	-24 36	48.29	0.19	2	71.090					2953	
117	-35	22	7.7	F0	06	30.414	0.11	4	70.958	-35 22	12.18	0.13	4	70.958					2954	
118	-51	22	8.2	K2	06	35.430	0.05	4	70.203	-50 53	09.66	0.19	4	70.203					15	
119*	-50	18	8.3	G0	06	35.933	0.21	4	70.231	-50 17	30.60	0.06	4	70.231					16	
120	-32	18	9.2	K0	0	06	39.059	0.10	3	70.068	-31 45	20.29	0.10	3	70.068					2955
121	-59	5	8.8	G5	06	48.755	0.04	3	70.194	-59 20	18.72	0.05	3	70.194					2956	
122	-46	18	3.94	K0	06	52.979	0.03	104	71.244	-46 01	27.43	0.03	101	71.255	3		158	21	30003	
123	-10	9	8.2	K0	06	57.089	0.03	2	70.772	-10 27	56.48	0.30	2	70.772					2957	
124*	-22	12	8.6	F5	07	02.427	0.05	4	69.738	-21 39	36.25	0.11	4	69.738					2958	
125	-32	23	9.1	K0	0	07	07.510	0.15	4	70.508	-32 21	25.89	0.16	4	70.508					2959
126	+4	8	8.0	G5	07	21.015	0.09	2	71.705	+4 33	15.18	0.08	2	71.705					2960	
127	-3	9	7.20	K2	07	21.380	0.03	2	71.804	-2 50	22.13	0.19	2	71.804					2961	
128	-62	9	6.62	A2	07	23.078	0.09	6	69.689	-62 34	30.70	0.13	6	69.689	2007		162		32007	
129	+3	10	8.4	K5	07	23.165	0.04	2	71.841	+3 53	16.81	0.07	2	71.841					2962	
130	-66	6	7.9	G5	0	07	29.819	0.16	4	69.448	-65 38	07.19	0.14	4	69.448					18471
131	-9	13	7.4	F0	07	29.853	0.39	2	72.193	-9 15	08.92	0.17	2	72.193					2963	
132	-63	10	8.1	F0	07	34.157	0.18	4	69.924	-63 34	28.87	0.12	4	69.924					2964	
133	-33	26	9.2	G0	07	38.047	0.09	4	71.131	-33 33	32.07	0.07	4	71.131					2965	
134*	-49	20	8.5	F2	07	38.300	0.18	4	70.963	-49 25	17.38	0.32	4	70.963					17	
135	-82	4	5.30	K0	0	07	48.012	0.09	6	69.135	-82 30	07.96	0.16	6	69.135	3971		173		

109 SDS, 11.2m, 8°2, 126°.
119 8.6m-11.6m, 1°1, 319°.

124 8.7m-11.2m, 0°6, 8°.
134 9.0m-9.4m, 0°9, 268°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
144	+ 4	13	8.5	K2	0 08 16.598	0.07	2	71.218	+ 4 48 39.01	0.07	2	71.218				2974
145	-14	16	7.9	K0	08 20.428	0.07	2	71.198	-14 10 51.68	0.01	2	71.198				2975
146	- 4	7	6.81	G5	08 36.028	0.03	2	70.751	- 3 35 57.98	0.12	2	70.751				2976
147	-41	28	7.62	G5	08 46.537	0.13	4	70.710	-40 39 03.11	0.13	4	70.710				19
148	-35	41	7.7	G5	08 59.803	0.10	4	70.441	-34 44 17.68	0.09	4	70.441				2977
149	-56	29	8.37	F0	0 09 01.962	0.10	3	68.712	-56 01 39.76	0.45	3	68.712				2978
150	-28	26	5.56	K0	09 02.227	0.02	104	70.980	-28 04 40.88	0.03	103	71.011				80005
151	-19	11	6.92	G5	09 02.486	0.19	2	71.188	-18 52 43.79	0.18	2	71.188				2979
152	-18	11	8.7	K2	09 03.999	0.30	2	71.692	-18 14 49.23	0.34	2	71.692				2980
153	-35	42	5.19	F5	09 11.996	0.03	61	71.459	-35 24 43.79	0.04	59	71.477				30006
154	-72	8	9.0	F5	0 09 12.983	0.11	4	69.199	-72 33 13.14	0.10	4	69.199				18472
155	-36	37	9.2	G0	09 19.545	0.01	3	70.431	-35 49 27.99	0.06	3	70.431				2981
156	-80	3	7.21	G5	09 20.938	0.05	4	69.358	-80 27 07.49	0.18	4	69.358				18473
156 SP					09 20.709	0.35	4	69.722	-80 27 08.49	1.55	3	69.873				18473
157	-42	32	6.60	K0	09 25.322	0.07	6	70.705	-42 26 59.70	0.04	6	70.705				32009
158	- 1	9	8.5	F0	0 09 25.533	0.07	2	71.739	- 0 30 28.53	0.28	2	71.739				2982
159	- 8	16	8.8	K0	09 32.724	0.19	3	72.102	- 7 58 48.72	0.08	3	72.102				2983
160	-76	11	7.42	K0	09 33.772	0.14	4	69.754	-75 45 18.49	0.03	4	69.754				18474
160 SP					09 33.767	0.03	4	69.798	-75 45 18.28	0.38	4	69.798				18474
161	-15	22	8.6	G5	09 41.045	0.04	2	72.088	-15 26 33.18	0.01	2	72.088				2984
162	-51	32	9.1	K0	0 09 47.535	0.25	4	69.042	-50 58 41.99	0.08	4	69.042				20
163	-53	26	9.1	K0	10 02.447	0.10	4	69.779	-52 36 40.45	0.12	4	69.779				2985
164	- 2	19	7.28	K0	10 06.517	0.19	2	71.266	- 1 30 18.88	0.21	2	71.266				2986
165	-43	30	7.34	G5	10 09.832	0.16	3	70.104	-43 26 33.40	0.25	3	70.104				21
166	-62	14	8.5	G5	10 12.079	0.13	4	69.569	-61 35 27.46	0.05	4	69.569				2987
167	-22	33	8.2	K5	0 10 21.022	0.10	4	69.490	-22 32 32.78	0.16	4	69.490				2988
168	-23	47	8.2	K2	10 36.571	0.08	4	70.490	-23 12 48.31	0.24	4	70.490				2989
169	-28	40	8.28	G5	10 37.557	0.20	4	71.184	-28 05 29.58	0.11	4	71.184				2990
170	- 6	19	8.2	K2	10 38.729	0.10	2	72.106	- 5 31 11.80	0.28	2	72.106				2991
171	+14	14	2.87	B2	10 39.448	0.18	5	70.136	+14 54 20.39	0.22	5	70.136				30007
172	-38	40	7.26	K2	0 10 42.766	0.09	4	70.691	-38 06 03.57	0.10	4	70.691				2992
173	-27	38	7.50	K0	10 43.410	0.12	4	70.380	-26 36 11.77	0.11	4	70.380				2993
174	-60	12	8.40	G5	11 00.396	0.13	4	69.879	-60 10 59.74	0.23	4	69.879				2994
175	-66	9	8.8	K0	11 04.809	0.23	4	70.166	-66 13 20.43	0.11	4	70.166				18475
176	-68	3	9.3	G5	11 12.345	0.20	4	69.915	-68 28 32.55	0.30	4	69.915				18476
177	-49	33	9.4	K0	0 11 12.919	0.06	3	70.676	-49 28 35.14	0.12	3	70.676				22
178	+ 0	19	6.87	K0	11 13.776	0.12	2	71.243	+ 1 06 20.57	0.14	2	71.243				2995
179	-49	35	7.11	A2	11 15.518	0.13	6	71.470	-48 57 43.45	0.14	6	71.470				32011
180	-49	36	8.8	K0	11 16.846	0.05	4	70.431	-48 42 38.43	0.22	4	70.431				23
181	-10	25	8.6	K0	11 22.805	0.35	2	72.175	-10 01 13.87	0.17	2	72.175				2996
182	-18	25	8.0	B5	0 11 22.985	0.37	3	72.173	-17 49 24.53	0.14	3	72.173				2997
183	+ 0	21	8.9	G0	11 27.462	--	1	72.686	+ 0 35 27.11	--	1	72.686				2998
184	- 4	12	7.8	K0	11 27.631	--	1	72.624	- 4 11 11.81	--	1	72.624				2999
185	-85	2	5.74	K5	11 27.975	0.07	6	69.865	-85 16 20.29	0.19	6	69.865				33972
185 SP					11 27.970	0.16	6	69.425	-85 16 20.08	0.24	6	69.425				53972
186	- 9	30	7.98	K0	0 11 43.471	--	1	71.656	- 9 06 37.19	--	1	71.656				3000
187	-55	35	6.66	F5	11 46.383	0.22	4	70.734	-55 20 50.97	0.15	4	70.734				32013
188	+ 4	22	8.8	A5	11 47.448	--	1	71.642	+ 4 36 28.26	--	1	71.642				3001
189	-21	17	6.85	F8	11 48.672	0.19	4	71.531	-21 28 23.66	0.09	4	71.531				3002
190	- 3	18	7.36	K0	11 50.873	--	1	72.902	- 2 28 33.00	--	1	72.902				3003
191	-15	30	6.96	F5	0 11 55.388	--	1	72.637	-14 42 32.14	--	1	72.637				3005
192	+19	27	4.94	M0	12 00.804	0.03	31	70.793	+19 55 43.60	0.06	31	70.793				81004
193	-31	67	9.5	G0	12 04.158	0.21	3	70.448	-31 18 04.00	0.59	3	70.448				3007
194	-48	27	8.87	K2	12 05.464	0.15	4	71.233	-48 09 33.64	0.09	4	71.233				24
195	-13	31	8.3	K0	12 08.062	--	1	72.556	-13 01 33.75	--	1	72.556				3009
196	-47	44	8.5	K5	0 12 08.750	0.17	4	70.647	-46 53 42.90	0.24	4	70.647				25
197	-44	42	8.7	K0	12 08.807	0.18	4	71.191	-44 06 32.44	0.21	4	71.191				26
198	-33	60	8.6	K0	12 08.859	0.21	4	70.889	-33 19 25.80	0.10	4	70.889				3010
199	-89	1	7.22	A0	12 17.301	0.02	167	70.935	-88 38 27.41	0.03	164	70.931				61655
199 SP					12 17.321	0.02	212	70.862	-88 38 27.39	0.03	207	70.843				71655
200	-10	30	5.76	B9	0 12 21.376	--	1	71.931	- 9 50 50.17	--	1	71.931				3012
201*	-32	66	7.94	F5	12 22.085	0.05	3	70.950	-32 25 49.75	0.13	3	70.950				3013
202	-16	37	8.7	F0	12 28.671	--	1	72.597	-16 19 57.38	--	1	72.597				3014
203	-36	68	8.0	K5	12 29.106	0.08	4	70.800	-36 26 18.35	0.05	4	70.800				3015
204	-29	50	8.6	A3	12 36.408	0.22	4	69.994	-29 17 03.95	0.13	4	69.994				3016
205	-45	49	8.9	K0	0 12 39.762	0.13	3	70.106	-44 55 42.67	0.19	3	70.106				27
206	-25	67	8.4	K0	12 41.306	0.20	3	70.421	-24 45 46.08	0.10	3	70.421				3017
207	-35	67	8.4	K0	12 41.729	0.04	4	70.964	-34 46 24.50	0.18	4	70.964				3018
208	-17	24	7.70	F2	12 43.802	0.19	2	71.847	-17 02 02.33	0.13	2	71.847				3019
209	-40	40	7.49	G5	12 44.666	0.23	4	70.976	-40 22 25.87	0.05	4	70.976				28
210	-42	54	8.3	F8	0 12 45.911	0.15	4	70.972	-42 26 34.00	0.12	4	70.972				29
211	-69	4	8.7	K5	12 48.980	0.24	4	69.027	-69 07 38.41	0.12	4	69.027				18478
212	-35	69	8.34	K0	13 12.806	0.08	4	70.498	-35 25 41.25	0.09	4	70.498				3020
213	-12	28	8.3	A2	13 16.070	0.11	4	71.243	-12 16 04.71	0.11	2	71.243				3021
214	+ 1	25	8.5	A5	13 17.695	0.11	2	71.747	+ 2 25 28.57	0.01	2	71.747				3022

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
215	-72	20	8.8	K0	0 13 19.748	0.21	4	69.518	-71 42 14.66	0.09	4	69.518				18479
216	+3	26	7.02	A0	13 23.205	0.06	2	71.216	+3 58 24.25	0.17	2	71.216		304	44	3023
217	-67	13	8.6	F8	13 23.604	0.08	4	69.740	-67 12 06.98	0.04	4	69.740				18480
218	-21	21	9.1	K2	13 24.088	0.33	4	69.983	-20 41 38.28	0.20	4	69.983				3024
219	-14	32	8.8	G5	13 32.008	0.15	2	71.675	-14 19 53.33	0.18	2	71.675				3025
220	-43	50	8.7	K0	0 13 32.743	0.16	5	70.953	-42 56 55.74	0.15	5	70.953				30
221	-59	19	8.1	K0	13 37.117	0.19	4	69.763	-59 03 06.32	0.14	4	69.763				3026
222	-32	72	5.69	K0	13 37.451	0.10	6	69.487	-31 43 26.67	0.12	6	69.487	2014	306		32014
223	-38	51	9.0	K5	13 37.658	0.10	4	70.928	-37 50 21.94	0.16	4	70.928				3027
224	-63	23	8.4	K2	13 45.772	0.24	4	69.982	-63 26 23.64	0.10	4	69.982				3028
225	-7	29	8.4	F5	0 13 48.499	0.22	2	71.713	-7 18 27.89	0.44	2	71.713				3029
226	-20	32	8.6	G5	13 50.065	0.26	2	71.732	-19 40 34.56	0.60	2	71.732				3030
227	-37	56	9.1	F5	13 57.238	0.08	4	70.677	-37 04 26.01	0.19	4	70.677				3031
228	+7	27	6.19	G5	13 59.711	0.12	6	69.758	+7 57 44.94	0.13	6	69.758	2015	315		32015
229	-14	35	7.13	A3	14 01.323	0.14	2	71.690	-13 40 53.43	0.07	2	71.690				3033
230	-33	71	7.43	K0	0 14 01.485	0.14	4	70.265	-33 02 17.40	0.04	4	70.265				3032
231	-56	52	7.88	K0	14 05.026	0.07	4	69.271	-55 44 50.47	0.22	4	69.271				3034
232	+1	28	7.29	M0	14 05.523	0.02	2	71.207	+1 34 21.78	0.18	2	71.207				3035
233	-31	83	8.9	K0	14 09.701	0.11	3	69.739	-30 42 44.22	0.14	3	69.739				3036
234	-40	44	9.4	K0	14 09.890	0.10	2	70.254	-39 46 10.59	0.15	2	70.254				3037
235	-21	24	6.50	B8	0 14 10.275	0.07	4	69.741	-20 29 16.17	0.22	4	69.741		324		3038
236	-50	47	8.86	F5	14 22.283	0.07	4	70.165	-49 54 19.43	0.12	4	70.165		332		31
237	-13	40	9.0	K0	14 30.653	0.09	2	71.302	-13 20 19.81	0.07	2	71.302				3039
238	-58	14	7.5	K0	14 31.200	0.10	4	69.491	-58 25 47.19	0.21	4	69.491				3040
239	-5	35	8.5	K0	14 42.337	0.28	2	71.254	-4 43 37.02	0.06	2	71.254				3041
240	-19	30	6.47	F0	0 15 00.564	0.18	2	71.222	-19 19 43.67	0.02	2	71.222	2017	343		3042
241	+0	28	6.43	G5	15 13.603	0.09	6	69.837	+1 24 39.67	0.19	6	69.837		346		32017
242	-70	9	8.3	G0	15 14.015	0.09	4	69.470	-70 09 22.35	0.14	4	69.470				18481
243	-6	37	8.6	K0	15 14.508	0.04	2	71.735	-6 25 54.59	0.37	2	71.735				3043
244	-2	31	7.16	G5	15 14.770	0.34	2	71.694	-2 08 25.71	0.12	2	71.694		349		3044
245	-18	38	8.7	G0	0 15 20.225	0.04	2	71.701	-17 50 40.20	0.21	2	71.701				3045
246	-26	81	8.0	G5	15 24.993	0.06	4	69.225	-26 11 39.23	0.14	4	69.225				3046
247	+2	32	7.12	F0	15 33.859	0.21	2	71.198	+3 31 08.61	0.24	2	71.198		359		3047
248	-46	58	9.2	K0	15 34.299	0.09	4	69.865	-46 02 26.00	0.08	4	69.865				32
249	-52	25	9.2	K0	15 39.764	0.27	4	69.732	-51 56 53.11	0.04	4	69.732				3048
250	-79	8	7.98	G0	0 15 41.572	0.13	4	69.268	-79 30 36.05	0.02	4	69.268		361		18482
250 SP					15 41.509	0.13	4	69.616	-79 30 35.80	0.14	4	69.616		361		18482
251	-53	48	9.2	G0	15 42.736	0.17	4	69.823	-53 14 38.73	0.04	4	69.823				3049
252	-2	34	7.47	K2	15 44.890	0.14	2	71.206	-2 17 33.06	0.12	2	71.206				3050
253*	-21	31	6.74	A0	15 45.120	0.04	4	69.744	-21 24 57.83	0.10	4	69.744		367		3051
254	-65	9	8.9	K0	0 15 47.094	0.10	4	69.767	-65 20 28.09	0.19	4	69.767				18483
255	-28	77	8.3	K2	16 00.838	0.07	4	69.797	-28 13 46.14	0.09	4	69.797				3052
256	-32	90	9.6	F5	16 07.821	0.21	4	70.453	-31 58 44.00	0.13	4	70.453				3053
257	-30	79	8.19	G0	16 10.962	0.24	3	70.188	-30 14 04.28	0.25	3	70.188		380		3054
258	-20	39	9.4	F5	16 13.250	0.16	2	71.216	-19 38 15.46	0.21	2	71.216				3055
259	-11	44	8.2	F5	0 16 14.776	0.25	2	71.227	-11 13 36.46	0.09	2	71.227				3056
260	-61	12	8.24	K2	16 19.722	0.10	4	69.785	-61 06 30.16	0.13	4	69.785		384		3057
261	-34	88	8.8	F0	16 24.023	0.07	4	70.539	-33 36 07.14	0.17	4	70.539				3058
262	-69	6	8.8	G5	16 25.483	0.29	4	70.176	-68 50 48.91	0.23	4	70.176				18484
263	-16	45	9.0	G0	16 26.724	0.12	2	71.278	-16 16 29.24	0.16	2	71.278				3059
264	-24	89	8.4	G5	0 16 37.686	0.17	4	71.118	-24 31 49.50	0.18	4	71.118				3060
265	-57	63	9.2	K0	16 40.100	0.15	4	70.659	-56 44 18.55	0.14	4	70.659				3061
266	-0	42	7.9	G0	16 42.840	0.13	2	71.858	+0 14 34.96	0.49	2	71.858				3062
267	-34	93	8.8	F5	16 44.856	0.06	3	69.768	-34 11 11.09	0.21	3	69.768				3063
268	-15	52	8.8	G5	16 50.145	0.29	2	72.159	-15 06 36.46	0.07	2	72.159				3064
269	-47	68	7.41	M0	0 16 52.258	0.07	4	69.968	-46 46 36.12	0.23	4	69.968		387		33
270	-9	48	3.75	K0	16 52.771	0.07	19	71.362	-9 06 04.42	0.07	19	71.362	9	388	55	30009
271	-54	62	7.79	K5	16 55.955	0.13	4	70.422	-54 07 18.40	0.25	4	70.422		390		3065
272	-18	39	8.3	G5	16 56.771	0.19	2	72.211	-17 57 23.70	0.20	2	72.211				3066
273	-60	24	7.99	G5	16 59.371	0.20	4	70.675	-59 58 04.31	0.11	4	70.675		391		3067
274	-22	45	7.5	K0	0 17 02.636	0.14	4	70.693	-22 05 05.31	0.11	4	70.693				3068
275	-8	42	7.15	F5	17 03.326	--	1	72.681	-7 30 01.91	--	1	72.681		393		3069
276	-51	69	7.28	K5	17 07.588	0.10	4	70.989	-50 42 25.25	0.10	4	70.989		395		34
277	-43	71	9.5	G5	17 08.860	0.11	4	70.169	-43 21 35.00	0.33	4	70.169				35
278	-3	36	7.05	G5	17 17.367	--	1	72.493	-2 45 23.73	--	1	72.493		397		3071
279	+0	34	7.9	G5	0 17 23.215	--	1	72.477	+1 18 18.17	--	1	72.477				3073
280	-25	96	7.58	K0	17 26.741	0.21	4	71.189	-25 23 54.65	0.06	4	71.189				3074
281	-18	41	6.88	K0	17 30.870	0.06	10	71.491	-17 58 40.41	0.10	10	71.491	1007	403	56	31007
282	-65	13	4.34	F8	17 34.165	0.05	31	69.927	-65 09 43.64	0.05	30	69.999	10	401	57	30010
283	-52	27	8.8	K0	17 50.875	0.17	4	70.531	-52 15 21.52	0.06	4	70.531				3079
284	-57	70	8.6	K0	0 17 55.039	0.38	3	70.472	-57 26 26.96	0.07	3	70.472				3080
285	-31	120	8.7	K5	17 57.834	0.11	3	70.450	-30 49 58.44	0.21	3	70.450				3081
286	+7	36	5.58	K0	18 01.315	0.02	116	71.022	+7 54 46.00	0.04	116	71.022	1008	413	61	81008
287	-62	25	8.4	K0	18 05.122	0.14	4	70.540	-61 58 43.23	0.25	4	70.540				3082
288	-41	77	9.1	K0	18 10.585	0.13	4	70.022	-41 22 21.50	0.09	4	70.022				36

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
289	-4	29	8.7	M0	0 18 16.031	--	1	71.699	-4 23 35.49	--	1	71.699				3083
290	-1	31	8.8	A5	18 16.120	--	1	71.541	-1 08 54.57	--	1	71.541				3084
291*	+10	32	6.55	A0	18 19.825	0.07	4	69.919	+10 41 59.00	0.26	4	69.919		419		25057
292	-37	89	8.6	K0	18 20.041	0.13	4	70.451	-36 45 18.18	0.13	4	70.451				3085
293	-20	48	8.0	F8	18 20.675	0.10	4	70.054	-20 12 29.27	0.12	4	70.054				3086
294	-70	12	5.42	B9	0 18 20.693	0.09	8	70.600	-69 54 08.76	0.21	6	70.494	2018	420	62	32018
295	-39	72	7.18	F5	18 24.756	0.05	6	70.868	-39 31 01.21	0.12	6	70.868	2019	422		32019
296	-72	31	8.31	K0	18 27.167	0.15	4	70.188	-72 15 19.80	0.22	4	70.188		423		18485
297	-35	98	8.03	G5	18 28.431	0.09	4	70.999	-35 12 43.56	0.06	4	70.999		424		3087
298	-26	104	8.5	F5	18 35.808	0.03	4	70.478	-26 32 20.14	0.20	4	70.478				3088
299	-4	31	8.0	F8	0 18 39.658	0.20	2	71.755	-3 35 22.87	0.10	2	71.755				3089
300	-9	54	8.9	K2	18 40.402	0.01	2	72.074	-8 33 31.15	0.42	2	72.074				3090
301	-48	57	9.3	G0	18 45.964	0.06	4	70.399	-47 59 34.47	0.12	4	70.399				37
302	-55	64	9.1	A2	18 55.580	0.24	4	69.271	-54 51 03.36	0.22	4	69.271				3091
303	-82	6	9.6	G0	18 56.891	0.08	4	69.777	-81 53 22.21	0.32	4	69.777				18486
303 SP					0 18 56.634	0.15	4	69.196	-81 53 22.34	0.66	4	69.196				18486
304	-25	107	8.5	K0	19 02.620	0.11	3	68.797	-25 21 10.40	0.11	3	68.797				3092
305	-36	106	8.49	F5	19 03.527	0.06	6	70.343	-35 38 17.49	0.17	6	70.343				21001
306	-65	17	9.0	G5	19 23.382	0.11	4	69.750	-64 38 55.80	0.13	4	69.750				18487
307	-12	50	8.7	K0	19 27.557	0.12	2	70.788	-12 17 16.25	0.17	2	70.788				3093
308	-39	80	8.03	A3	0 19 39.722	0.13	4	70.681	-38 39 43.94	0.16	4	70.681		440		3094
309	+12	25	6.40	K0	19 50.124	0.04	6	69.219	+13 12 18.59	0.09	6	69.219	2020	446		32020
310	-27	101	7.9	G5	19 52.477	0.10	4	69.962	-27 18 23.21	0.12	4	69.962				3095
311	-59	29	9.3	G5	20 06.739	0.15	4	69.253	-59 17 57.66	0.16	4	69.253				3096
312	+1	49	9.0	A2	20 06.755	0.37	2	70.709	+1 32 46.59	0.35	2	70.709				3097
313	-64	23	9.2	F8	0 20 10.505	0.08	4	69.470	-63 57 17.00	0.11	4	69.470				3098
314	-17	45	8.3	K5	20 14.401	0.16	2	71.202	-16 50 41.04	0.23	2	71.202				3099
315	-32	108	8.5	K2	20 15.031	0.11	4	69.295	-31 58 56.87	0.20	4	69.295				3100
316	-10	60	8.5	K0	20 15.963	0.14	2	71.690	-9 33 19.05	0.04	2	71.690				3101
317	-46	84	9.2	G5	20 16.185	0.32	4	70.645	-46 33 45.48	0.34	4	70.645				38
318	-40	68	9.7	F8	0 20 18.423	0.20	4	70.725	-40 33 56.89	0.06	4	70.725				39
319	-73	19	8.6	G5	20 21.736	0.14	4	69.244	-73 18 33.11	0.16	4	69.244				18488
320	-38	93	7.12	K5	20 22.925	0.13	4	70.233	-37 40 50.23	0.19	4	70.233		455		3102
321	-49	74	9.0	K0	20 23.843	0.03	4	70.176	-49 27 43.06	0.14	4	70.176				40
322	-7	48	7.7	K0	20 27.068	0.04	2	70.768	-6 44 24.25	0.07	2	70.768			67	3103
323	-4	38	8.5	F5	0 20 32.363	0.16	2	70.818	-3 52 49.61	0.29	2	70.818				3104
324	-45	101	9.5	F8	20 36.619	0.13	4	70.677	-45 18 02.77	0.04	4	70.677				41
325	-49	75	8.1	K0	20 38.697	0.07	4	70.001	-48 37 33.76	0.15	4	70.001				42
326	-35	110	8.6	K0	20 38.764	0.12	4	70.230	-34 50 31.84	0.04	4	70.230				3105
327	-51	88	7.60	K2	20 43.642	0.19	4	68.783	-50 49 32.65	0.11	4	68.783		462		43
328	-33	121	9.1	F5	0 21 04.024	0.17	4	70.406	-33 08 36.81	0.05	4	70.406				3106
329	-14	58	9.0	G0	21 05.330	0.25	2	71.197	-14 21 51.47	0.05	2	71.197				3107
330	-3	48	8.0	G5	21 06.293	0.46	2	71.202	-3 20 02.97	0.23	2	71.202				3108
331	-1	41	8.6	K0	21 06.701	0.04	2	71.699	-0 49 05.90	0.00	2	71.699				3109
332	-76	35	9.0	K5	21 06.880	0.11	4	70.213	-76 16 54.37	0.06	4	70.213				18489
332 SP					0 21 06.861	0.23	4	69.757	-76 16 54.17	0.24	4	69.757				18489
333	-29	102	8.4	K0	21 08.713	0.15	3	69.801	-28 56 22.76	0.16	3	69.801				3110
334	-83	5	9.2	F5	21 12.149	0.28	4	70.525	-82 57 39.00	0.27	4	70.525				18490
334 SP					21 12.082	0.11	4	70.190	-82 57 38.55	0.41	4	70.190				18490
335	+2	44	8.0	K0	21 22.896	0.19	2	71.705	+3 29 02.23	0.26	2	71.705				3111
336	-68	10	9.1	K0	0 21 23.744	0.09	5	68.898	-67 59 27.55	0.17	4	69.179				18491
337	-28	111	8.8	F5	21 28.637	0.24	3	69.760	-27 41 23.79	0.36	3	69.760				3112
338	-43	93	9.2	F5	21 38.584	0.05	4	70.373	-43 28 49.22	0.27	4	70.373				44
339	-24	122	7.7	G5	21 42.431	0.07	4	69.262	-23 40 48.34	0.17	4	69.262				3113
340	-2	49	8.5	K5	21 44.801	0.02	2	71.728	-1 31 05.57	0.19	2	71.728				3114
341	-36	119	8.3	K2	0 21 50.179	0.06	5	71.282	-35 55 01.59	0.13	5	71.282				3115
342	-3	49	6.28	K0	21 56.235	0.13	6	69.087	-2 29 44.53	0.17	6	69.087	2021	480	72	32021
343	-57	84	9.1	G5	21 56.467	0.18	4	68.822	-56 55 38.10	0.14	4	68.822				3116
344	-5	58	7.8	M0	21 59.708	0.07	2	71.731	-4 55 29.43	0.01	2	71.731				3117
345	-29	109	8.7	G0	22 01.284	0.13	4	70.578	-28 41 33.21	0.15	4	70.578				3118
346	-24	127	8.0	F0	0 22 15.229	0.05	4	69.324	-24 33 46.79	0.22	4	69.324				3119
347	-12	59	8.0	F2	22 17.710	0.05	2	71.705	-11 59 16.13	0.16	2	71.705		486		3120
348	-16	63	8.4	K0	22 22.002	0.14	2	71.258	-16 18 18.84	0.02	2	71.258		487		3121
349	-20	57	8.7	F0	22 24.916	0.16	4	69.584	-20 13 14.05	0.22	4	69.584				3122
350	-78	11	8.8	G5	22 26.015	0.07	3	70.030	-78 31 38.84	0.09	3	70.030				18492
350 SP					0 22 25.929	0.12	4	69.263	-78 31 38.45	0.33	4	69.263				18492
351	-42	107	7.61	G5	22 28.539	0.14	4	70.117	-42 09 46.72	0.14	4	70.117		490		45
352	-62	31	8.3	F8	22 36.956	0.08	4	69.249	-62 28 59.55	0.07	4	69.249				3123
353	+1	57	5.99	G5	22 50.252	0.03	77	71.513	+1 39 46.58	0.04	75	71.529	1010	496	75	31010
354	-18	51	7.31	K2	22 51.372	0.04	2	71.744	-17 42 15.14	0.17	2	71.744		497		3124
355	-58	25	8.8	G5	0 22 52.476	0.24	3	71.623	-58 32 33.73	0.09	3	71.623				3125
356	-65	24	9.3	K0	22 52.953	0.30	3	68.841	-65 06 55.47	0.19	3	68.841				18493
357	-45	116	8.9	K0	22 58.331	0.16	4	70.197	-44 39 24.62	0.13	4	70.197				46
358	-20	59	8.0	F5	23 05.541	0.08	3	70.977	-20 12 38.18	0.13	3	70.977				3126
359	-18	52	8.6	K5	23 08.710	0.24	2	72.231	-17 50 40.37	0.01	2	72.231				3127

291 A 287, 7.0m-7.9m, 0.8.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch α	Decl	1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
360	-52	38	7.54	G5	0	23	13.441	0.18	4	70.664	-51° 40'	47.65	0.14	4	70.664		505		47
361	-28	118	7.04	K0		23	15.528	0.02	3	70.215	-27° 59'	12.29	0.09	3	70.215		507		3128
362	-75	37	8.8	K0		23	16.236	0.07	4	70.379	-74° 40'	52.49	0.11	4	70.379				18494
363	-64	30	7.9	G5		23	18.980	0.09	4	70.747	-64° 17'	10.79	0.20	4	70.747				18495
364	-9	70	7.04	K0		23	19.894	--	1	70.833	-8° 37'	40.95	--	1	70.833		508		3129
365	-14	62	8.5	F5	0	23	23.354	--	1	72.686	-13° 31'	55.12	--	1	72.686				3130
366	-77	16	2.90	G0		23	23.511	0.04	63	70.882	-77° 32'	01.57	0.05	62	70.886	11	503	76	30011
366	SP					23	23.605	0.05	55	71.000	-77° 32'	01.59	0.09	53	70.994	11	503	76	50011
367	-31	162	7.55	G5		23	26.706	0.08	4	69.994	-31° 01'	29.56	0.15	4	69.994		510		3131
368	-0	62	8.2	G5		23	29.506	--	1	70.882	+0° 09'	41.28	--	1	70.882				3132
369	-47	108	9.7	K5	0	23	33.474	0.05	4	70.421	-47° 15'	03.28	0.18	4	70.421				48
370	+0	54	8.6	K0		23	38.218	0.37	2	71.720	+0° 53'	15.33	0.02	2	71.720				3133
371	+3	46	6.89	B8		23	42.209	0.01	2	72.292	+3° 32'	56.71	0.17	2	72.292		515		3134
372	-22	70	7.52	G5		23	45.216	0.13	4	69.798	-21° 56'	58.13	0.07	4	69.798		517		3135
373	-62	33	8.9	K2		23	45.559	0.19	4	71.023	-61° 48'	54.87	0.06	4	71.023				3136
374	-42	116	2.44	K0	0	23	49.393	0.04	38	71.261	-42° 34'	46.94	0.03	38	71.261	12	519	77	30012
375	-19	58	6.51	M0		23	50.441	0.04	2	72.859	-18° 58'	12.99	0.11	2	72.859		520		3137
376	-50	82	8.52	F8		24	19.068	0.19	3	70.650	-49° 45'	03.82	0.35	3	70.650		524		49
377	-40	84	9.1	F5		24	22.673	0.21	4	71.194	-39° 50'	09.24	0.12	4	71.194				3138
378	+24	52	6.72	F5		24	27.112	0.05	6	70.874	+24° 45'	55.60	0.20	6	70.874	2024	527		32024
379	-60	33	8.8	G5	0	24	28.373	0.13	4	70.467	-60° 09'	16.70	0.21	4	70.467				3139
380	-5	64	7.17	K0		24	32.307	0.10	2	71.833	-5° 16'	48.80	0.10	2	71.833		525		3140
381	-10	76	7.42	G5		24	34.525	0.02	2	71.845	-10° 08'	58.54	0.19	2	71.845			80	3141
382	-54	100	8.3	K2		24	39.272	0.08	4	70.272	-54° 22'	01.02	0.40	4	70.272				3143
383	-15	70	8.6	K2		24	40.036	--	1	72.790	-14° 31'	30.79	--	1	72.790				3144
384	-71	16	9.2	G5	0	24	43.078	0.05	3	70.075	-71° 30'	51.83	0.17	3	70.075				18496
385	-30	124	8.6	K0		24	44.023	0.10	4	70.010	-29° 51'	30.51	0.17	4	70.010				3145
386	-26	138	5.95	G5		24	44.517	0.10	6	71.064	-25° 49'	25.08	0.10	5	71.092	2025	530		32025
387	+2	54	7.7	G5		24	46.169	--	1	71.929	+2° 32'	14.80	--	1	71.929		531		3146
388	-37	134	9.1	M1		24	47.198	0.04	4	71.165	-36° 40'	53.24	0.13	4	71.165				3147
389	-34	146	8.0	K5	0	24	49.228	0.09	4	70.970	-34° 09'	30.80	0.08	4	70.970				3148
390	-59	40	9.0	A5		24	53.897	0.19	4	71.477	-59° 29'	19.91	0.32	4	71.477				3149
391	-63	43	9.3	K2		25	03.281	0.25	3	70.421	-63° 09'	54.73	0.17	3	70.421				3150
392	+3	48	8.5	K2		25	09.080	--	1	72.575	+4° 19'	51.11	--	1	72.575				3151
393	-42	129	7.9	F0		25	10.620	0.15	4	70.979	-41° 39'	31.41	0.14	4	70.979				50
394	-25	150	8.1	K2	0	25	21.041	0.11	4	70.245	-25° 33'	30.56	0.08	4	70.245				3152
395*	-83	6	8.06	F5		25	21.066	0.18	4	70.529	-83° 24'	56.77	0.21	4	70.529		541		18497
395	SP					25	20.991	0.17	4	69.783	-83° 24'	56.37	0.21	4	69.783		541		18497
396	-2	57	8.5	K2		25	21.741	--	1	72.523	-1° 57'	29.78	--	1	72.523				3153
397	-33	152	4.96	M3		25	27.055	0.03	4	71.197	-33° 17'	00.17	0.14	4	71.627	2026	544	84	32026
398	-12	72	7.54	M3	0	25	28.336	0.04	39	70.882	-11° 56'	06.74	0.04	39	70.882	1011	545	85	81011
399	-76	40	8.3	G5		25	31.443	0.06	5	70.389	-75° 53'	24.62	0.13	4	70.288				18498
399	SP					25	31.442	0.07	4	70.316	-75° 53'	25.16	0.23	4	70.316				18498
400	-57	94	9.2	K0		25	34.036	0.25	3	70.606	-57° 31'	16.81	0.19	3	70.606				3154
401	+15	63	6.46	K2		25	36.606	0.06	2	69.744	+16° 10'	07.54	0.18	2	69.744	1012	548	86	31012
402	+9	47	6.02	F2	0	25	44.832	0.14	6	71.985	+9° 54'	54.22	0.23	6	71.985	2028	550	87	32028
403	-29	125	6.80	G5		25	44.835	0.16	4	70.283	-29° 18'	59.75	0.17	4	70.283		551		3155
404	-21	57	6.41	G0		25	50.529	0.11	5	70.010	-20° 36'	37.90	0.07	5	70.010	2029	554	88	3156
405	-31	175	9.1	F8		25	51.764	0.12	2	68.843	-31° 16'	38.43	0.14	2	68.843				3157
406	-23	165	8.0	K0		25	52.488	0.13	4	70.735	-23° 07'	52.89	0.15	4	70.735				3158
407	-33	156	9.2	G0	0	26	11.756	0.53	3	70.337	-33° 02'	29.58	0.10	3	70.337				3159
408	-25	155	7.15	A5		26	20.644	0.06	4	70.785	-24° 54'	47.21	0.08	4	70.785		567		3160
409	-53	94	9.2	G4		26	27.441	0.04	3	70.390	-53° 20'	08.65	0.06	3	70.390				3161
410	-35	147	8.5	G5		26	28.248	0.07	3	70.732	-35° 09'	48.06	0.17	3	70.732				3162
411	-61	25	9.2	G5		26	30.145	0.00	3	70.007	-61° 03'	04.08	0.16	3	70.007				3163
412	-0	69	8.5	K2	0	26	36.212	0.22	2	72.900	-0° 14'	07.33	0.07	2	72.900				3164
413	-32	151	9.1	F5		26	36.887	0.08	3	71.017	-31° 53'	55.75	0.06	3	71.017				3165
414*	-27	132	7.5	G5		26	37.735	0.02	3	70.780	-27° 17'	11.57	0.05	3	70.780				3166
415	-12	77	7.66	K2		26	38.354	--	1	72.806	-11° 52'	28.80	--	1	72.806		569		3167
416	-45	142	9.3	F8		26	45.177	0.16	4	71.199	-45° 20'	08.92	0.05	4	71.199				51
417	-56	83	9.0	K2	0	26	46.196	0.10	4	70.360	-55° 54'	56.38	0.13	4	70.360				3169
418	-6	80	8.5	K0		26	46.238	--	1	71.800	-5° 54'	37.10	--	1	71.800				3170
419	-46	127	8.7	A0		26	53.486	0.07	4	70.942	-45° 57'	12.50	0.10	4	70.942				52
420	-4	51	7.07	K5		26	56.045	0.07	2	72.107	-3° 44'	44.29	0.07	2	72.107		574		3172
421	-41	112	6.78	K0		26	56.402	0.18	4	70.727	-40° 56'	30.35	0.16	4	70.727		575		53
422	-3	57	7.04	K2	0	27	05.511	--	1	71.937	-3° 06'	59.61	--	1	71.937		576		3173
423	-51	119	8.9	K0		27	13.697	0.17	4	69.949	-51° 09'	22.37	0.12	4	69.949				54
424	-1	51	7.9	G5		27	17.193	--	1	71.891	-0° 35'	49.97	--	1	71.891				3174
425	-15	84	6.24	F2		27	20.052	0.05	6	69.558	-15° 08'	24.16	0.07	6	69.558	2030	579		32030
426	-1	52	7.52	F0		27	21.450	--	1	70.910	-1° 23'	36.23	--	1	70.910		581		3175
427	-19	65	8.8	F2	0	27	24.960	--	1	72.564	-19° 19'	07.15	--	1	72.564				3176
428	-4	54	6.05	K5		27	29.183	0.04	29	71.519	-4° 14'	00.33	0.07	26	71.593	13	584	91	30013
429	-47	127	9.2	G5		27	33.780	0.20	3	71.351	-46° 57'	30.11	0.06	3	71.351				55
430	+4	63	6.61	F5		27	34.268	0.22	2	71.804	+4° 35'	02.09	0.21	2	71.804		587		3177
431	-10	85	9.0	A2		27	36.090	--	1	72.725	-9° 30'	41.11	--	1	72.725				3178

395 SDS, 8.5m-9.4m, 1°0, 17°.

414 8.1m-9.9m, 0°4, 54°.

CATALOG OF 23,001 STARS FOR 1950.0

241

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
432	-60	38	8.07	G5	0 27 39.939	0.14	4	69.516	-60 04 14.75	0.20	4	69.516		589		3179
433	-22	78	8.4	K0	27 40.005	0.08	4	71.091	-21 44 18.39	0.14	4	71.091				3180
434	-66	33	9.1	K0	27 41.699	0.08	4	70.934	-66 26 26.25	0.11	4	70.934				18499
435	-24	179	5.23	A3	27 52.692	0.05	59	71.300	-24 03 50.35	0.04	59	71.300	14	590	92	30014
436	-16	81	8.2	F8	27 55.103	0.07	2	72.232	-16 11 29.93	0.08	2	72.232		592		3181
437	-48	101	8.8	G0	0 27 55.415	0.11	5	71.293	-48 19 47.71	0.19	5	71.293				56
438	-55	106	9.1	K5	27 55.991	0.09	4	70.240	-55 18 42.91	0.11	4	70.240				3182
439	-8	81	9.0	F0	27 56.873	0.11	2	72.084	-8 21 37.89	0.06	2	72.084				3183
440	-19	68	8.0	F8	28 06.892	0.21	2	71.315	-18 53 49.32	0.17	2	71.315			94	3184
441	-29	137	8.7	K0	28 08.996	0.13	4	69.209	-28 48 44.22	0.04	4	69.209				3185
442	-28	144	8.3	G5	0 28 09.228	0.08	4	69.934	-28 12 41.32	0.14	4	69.934				3186
443	-10	89	6.72	A3	28 27.751	0.07	2	71.772	-10 21 38.23	0.22	2	71.772		607		3187
444	-36	163	8.7	K0	28 29.292	0.27	4	70.817	-36 30 51.45	0.15	4	70.817				3188
445	-38	149	8.3	K0	28 29.763	0.07	4	70.322	-38 03 49.99	0.12	3	70.124				3189
446	-43	129	8.5	K0	28 36.284	0.08	4	70.444	-43 34 05.82	0.20	4	70.444				57
447	-52	52	8.3	K5	0 28 39.247	0.07	4	69.299	-52 13 44.35	0.25	4	69.299				3190
448	-49	114	8.1	K0	28 41.828	0.14	4	70.679	-48 55 01.49	0.14	4	70.679				58
449	-42	151	9.7	F5	28 42.242	0.06	4	70.977	-42 34 08.88	0.06	4	70.977				59
450	-17	70	8.4	G0	28 45.800	0.09	2	71.251	-17 04 13.24	0.21	2	71.251				3191
451	-52	53	8.8	K5	28 53.779	0.19	4	70.434	-51 55 31.88	0.37	4	70.434				3192
452	-69	12	9.1	G0	0 28 54.903	0.10	4	69.691	-69 18 51.51	0.11	4	69.691				18500
453	-56	92	8.23	K0	28 59.876	0.05	4	69.264	-56 31 02.99	0.26	4	69.264		617		3193
454	-49	115	4.88	A2	29 00.868	0.03	57	70.805	-49 04 46.99	0.04	57	70.805	15	619	96	30015
455	-2	69	6.78	A0	29 07.240	0.05	2	71.291	-2 04 10.00	0.29	2	71.291		622		3194
456	+4	66	8.0	F0	29 15.267	0.02	2	71.227	+4 34 13.46	0.04	2	71.227		624		3195
457	+1	79	8.7	K5	0 29 16.641	0.18	2	71.720	+2 11 01.80	0.02	2	71.720				3196
458	-31	198	9.4	F8	29 18.242	0.10	4	70.024	-30 41 12.07	0.27	4	70.024				3197
459	+0	70	8.2	F2	29 22.498	0.05	2	72.104	+1 14 04.08	0.29	2	72.104				3198
460	-14	80	8.9	K5	29 27.003	0.01	2	72.152	-13 35 06.08	1.06	2	72.152				3199
461	-13	89	8.2	F8	29 35.189	0.06	2	71.254	-12 34 15.00	0.34	2	71.254				3200
462	-24	191	8.5	K2	0 29 41.225	0.06	4	69.971	-24 24 31.28	0.06	4	69.971				3201
463	+6	64	5.66	A0	29 48.849	0.13	6	69.185	+6 40 46.48	0.17	6	69.185	2032	636		32032
464	-32	176	8.1	G5	29 57.971	0.16	4	70.434	-32 19 57.17	0.06	4	70.434				3202
465	+19	79	5.53	G5	29 58.105	0.14	6	69.993	+20 01 08.53	0.08	6	69.993	2033	641		32033
466	-38	159	8.8	K2	30 00.908	0.14	4	70.688	-38 33 12.97	0.10	4	70.688				3203
467	-44	127	9.2	G5	0 30 05.686	0.26	5	71.178	-44 20 30.59	0.09	5	71.178				60
468	-15	95	9.0	K7	30 06.914	0.46	2	71.694	-15 10 35.26	0.18	2	71.694				3204
469	-14	83	8.6	B9	30 12.525	0.07	2	71.717	-13 45 46.35	0.10	2	71.717				3205
470	-40	116	8.4	G0	30 18.622	0.05	4	71.106	-39 36 06.19	0.12	4	71.106				3206
471	-34	179	8.9	F2	30 25.188	0.13	4	70.940	-34 26 45.34	0.08	4	70.940				3207
472	-10	99	8.7	G5	0 30 35.346	0.12	2	71.743	-10 15 49.23	0.10	2	71.743				3208
473	-4	59	7.46	K0	30 38.223	0.02	2	70.597	-4 07 25.11	0.20	2	70.597		654		3209
474	-37	176	8.4	K0	30 39.232	0.23	4	70.966	-37 12 10.86	0.11	4	70.966				3210
475	-40	118	7.9	K0	30 41.326	0.13	4	70.491	-40 02 06.85	0.14	4	70.491				61
476	-22	88	8.5	F5	30 46.915	0.16	4	69.351	-22 07 46.10	0.13	4	69.351				3211
477	-54	127	9.0	K2	0 30 48.354	0.05	4	69.016	-54 25 48.88	0.15	4	69.016				3212
478	-20	86	8.6	K0	30 48.675	0.20	2	71.788	-19 46 22.71	0.16	2	71.788				3213
479	-1	60	7.07	A3	30 55.526	0.22	2	71.759	-0 53 03.66	0.04	2	71.759		656	104	3214
480	-64	47	9.3	K0	30 57.011	0.09	4	70.044	-64 11 02.92	0.10	4	70.044				18501
481	-41	131	9.0	F8	30 58.075	0.10	4	69.983	-41 00 13.35	0.10	4	69.983				62
482	-3	64	8.3	F0	0 31 04.809	0.03	2	71.684	-3 00 38.89	0.02	2	71.684				3215
483	-59	45	9.0	K2	31 05.523	0.10	4	69.881	-59 05 05.39	0.33	4	69.881				3216
484	+4	73	8.5	F5	31 06.216	0.08	2	71.291	+4 40 19.64	0.30	2	71.291		659		3217
485	-35	168	8.4	G0	31 09.936	0.09	4	70.001	-35 26 35.42	0.11	4	70.001				3218
486	-18	87	8.7	K5	31 10.348	0.07	2	71.276	-18 23 27.57	0.16	2	71.276				3219
487	-30	156	5.62	K0	0 31 12.713	0.03	45	70.772	-29 50 01.31	0.04	45	70.772	1013	665	105	31013
488	-71	20	6.10	A5	31 17.051	0.08	6	69.011	-71 32 30.70	0.19	6	69.011	2035	667	106	32035
489	+2	67	8.01	G5	31 17.085	0.07	47	71.436	-71 32 31.05	0.15	44	71.492	2035	667	106	52035
490	-34	189	8.0	K0	31 19.947	0.04	2	71.250	+3 02 39.57	0.20	2	71.250			108	3220
491	-68	18	8.50	K0	31 25.510	0.11	4	70.188	-33 41 14.26	0.07	4	70.188				3221
492	-32	183	8.07	M0	0 31 32.845	0.08	4	69.405	-67 41 05.02	0.11	4	69.405		672		18502
493	-57	115	7.98	G5	31 37.628	0.22	4	70.388	-32 33 40.37	0.08	4	70.388		674		3222
494	-58	30	7.5	K0	31 41.012	0.09	4	69.561	-57 21 38.93	0.14	4	69.561		676		3223
495	+0	77	8.4	K0	31 44.990	0.15	4	69.742	-58 28 38.63	0.15	4	69.742				3224
496	-12	94	8.8	K0	31 49.951	0.05	3	71.104	+0 43 37.91	0.14	2	71.259				3225
497	-7	82	6.84	F2	0 31 51.607	0.12	2	71.279	-11 33 30.40	0.21	2	71.279				3226
498*	-5	83	6.96	G0	31 54.673	0.00	2	71.276	-6 46 43.70	0.03	2	71.276		679		3227
499	-53	117	5.55	F5	31 56.659	0.20	2	71.728	-6 49 19.34	0.05	2	71.728		680		3228
500	-2	75	8.5	F8	32 05.951	0.03	102	71.389	-52 38 56.19	0.03	100	71.399	1014	683	111	31014
501	-24	219	8.4	F0	32 22.462	0.03	2	71.212	-1 35 07.87	0.19	2	71.212				3229
502	-26	171	7.66	G5	0 32 30.994	0.09	4	69.523	-23 45 30.52	0.12	4	69.523				3230
503	-49	134	8.8	G0	32 33.086	0.14	4	69.310	-26 24 03.43	0.12	4	69.310		693		3231
504	-19	82	8.0	K0	32 40.381	0.17	4	69.945	-49 12 37.93	0.15	4	69.945				63
505	-47	161	8.3	K0	32 49.023	0.11	2	71.227	-18 50 20.76	0.37	2	71.227				3232
					32 49.453	0.11	4	70.268	-47 26 17.86	0.09	4	70.268				64

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*	
506p	-54	136	8.9	A0	0	32	52.363	0.04	4	69.826	-53° 49'	26.84	0.25	4	69.826		699		3233	
507	-14	96	9.2	K7	32	54.893	0.28	2	71.755	-14 11	35.10	0.41	2	71.755					3234	
508	-62	49	9.2	K5	32	55.825	0.09	4	70.399	-62 21	24.44	0.13	4	70.399					3235	
509	-25	207	7.9	K0	32	55.889	0.12	3	69.093	-25 08	22.29	0.10	3	69.093					3236	
510	-60	41	9.5	G5	32	57.909	0.24	4	70.450	-60 05	28.01	0.13	4	70.450					3237	
511	-6	92	8.7	G5	0	32	58.781	0.14	2	71.220	-6 24	58.05	0.20	2	71.220				3238	
512	-1	68	5.93	F8	32	58.898	0.09	6	69.920	-0 46	49.38	0.03	6	69.920	2036	701			32036	
513	-8	93	8.1	G5	33	14.687	0.08	2	70.828	-8 10	36.10	0.20	2	70.828					3239	
514	-47	163	10.3	G0	33	18.213	0.15	4	70.192	-46 37	59.29	0.14	4	70.192					65	
515	-17	85	8.0	G5	33	20.818	0.24	2	71.223	-16 50	38.08	0.13	2	71.223					3240	
516	-5	87	8.9	K0	0	33	24.927	0.34	2	70.813	-5 19	40.14	0.03	2	70.813					3241
517	-50	123	9.3	K0	33	25.114	0.09	4	70.529	-50 33	49.47	0.21	4	70.529					66	
518	-39	140	9.2	F5	33	25.240	0.14	4	69.961	-38 59	52.59	0.12	4	69.961					3242	
519	-55	118	8.9	F2	33	26.435	0.34	4	69.991	-55 26	43.79	0.15	4	69.991					3243	
520	-6	96	6.61	F5	33	28.667	0.05	2	71.697	-5 50	42.43	0.14	2	71.697			712		3244	
521	-15	109	6.56	K0	0	33	32.253	0.01	2	71.214	-15 14	52.10	0.10	2	71.214			716		3245
522	-32	200	9.1	G0	33	35.340	0.19	4	69.933	-31 54	31.25	0.16	4	69.933					3246	
523	-21	70	8.0	F0	33	37.491	0.04	4	69.907	-21 02	02.21	0.13	4	69.907					3247	
524	-23	220	6.13	A3	33	37.538	0.14	6	69.809	-23 07	01.69	0.08	6	69.809	2037	719			32037	
525	-48	124	8.2	K2	33	41.307	0.06	4	70.737	-47 51	01.95	0.16	4	70.737					67	
526	-60	42	6.90	A5	0	33	44.247	0.08	6	70.086	-59 59	32.40	0.13	6	70.086	2038	723	117		32038
527	-73	39	7.9	G5	33	47.179	0.12	4	69.956	-73 29	50.49	0.02	4	69.956					18503	
528	-75	55	8.5	G0	33	55.743	0.11	5	69.956	-75 08	42.97	0.17	4	69.747					18504	
528 SP					33	55.696	0.21	4	69.673	-75 08	42.64	0.32	4	69.673					18504	
529	-31	228	8.6	M1	34	01.180	0.08	3	69.826	-30 36	31.71	0.13	3	69.826					3248	
530	-29	171	8.2	K0	0	34	04.679	0.10	4	70.017	-29 07	42.04	0.15	4	70.017					3249
531	-65	56	8.9	K0	34	10.726	0.12	4	69.773	-65 03	15.30	0.30	4	69.773					18505	
532	+14	76	5.86	B3	34	10.770	0.08	5	69.356	+14 57	24.48	0.10	5	69.356	2039	728	120		32039	
533	-18	99	8.1	K2	34	13.253	0.18	2	71.697	-18 04	17.79	0.10	2	71.697					3250	
534*	-61	30	9.19	G5	34	15.109	0.12	4	69.956	-61 19	22.17	0.29	4	69.956			731		3251	
535	-11	105	7.85	G5	0	34	19.916	0.26	2	71.729	-11 24	08.54	0.09	2	71.729			122		3252
536	-70	28	9.2	K5	34	23.268	0.14	4	69.994	-70 32	16.51	0.12	4	69.994					18506	
537	-4	64	8.2	K0	34	23.662	0.19	2	71.713	-3 40	32.35	0.10	2	71.713			732		3253	
538	-42	193	8.30	K7	34	44.355	0.03	4	69.982	-42 02	36.72	0.18	4	69.982			740		68	
539*	+8	81	8.9	G5	34	47.347	0.07	4	69.116	+8 43	37.65	0.21	4	69.116					25098	
540	-36	206	8.1	G0	0	34	52.500	0.09	4	70.395	-35 41	42.80	0.14	4	70.395					3254
541	+2	80	6.58	K0	34	56.010	0.13	6	69.729	+2 51	39.20	0.07	6	69.729	2040	744	125		32040	
542	-16	105	8.6	K0	35	02.221	0.45	2	71.203	-16 06	08.92	0.01	2	71.203					3255	
543	-45	192	9.2	K0	35	05.234	0.09	4	70.470	-44 40	58.10	0.11	4	70.470					69	
544	-9	117	8.2	G0	35	05.576	0.02	2	71.695	-9 20	53.86	0.08	2	71.695					3256	
545	-56	121	8.72	M3	0	35	18.729	0.24	4	69.275	-55 56	05.91	0.30	4	69.275			750		3257
546	+1	108	8.3	K0	35	26.281	0.36	2	71.218	+2 29	19.83	0.15	2	71.218					3258	
547	-23	231	8.5	G5	35	28.548	0.08	4	69.310	-22 36	45.74	0.07	4	69.310					3259	
548	-1	75	6.92	K0	35	30.960	0.15	2	71.709	-0 46	41.56	0.68	2	71.709			752		3260	
549	-45	193	9.9	G0	35	32.450	0.12	4	70.477	-45 07	40.10	0.12	4	70.477					70	
550	-78	14	8.8	F0	0	35	34.031	0.11	4	70.217	-77 45	40.00	0.25	4	70.217					18507
550 SP					35	34.004	0.16	4	70.197	-77 45	40.04	0.11	4	70.197					18507	
551	-30	178	8.6	K0	35	34.204	0.13	4	69.553	-29 47	13.34	0.11	4	69.553					3261	
552	-28	177	7.4	K0	35	38.642	0.16	3	69.754	-27 53	45.45	0.23	3	69.754					3262	
553	-58	36	9.0	K5	35	40.780	0.14	4	69.708	-58 20	12.16	0.06	4	69.708					3263	
554	-22	197	8.6	G5	0	35	42.369	0.14	3	70.393	-22 32	19.02	0.08	3	70.393					3264
555	-87	8	8.5	F5	35	47.824	0.12	4	69.928	-86 58	49.62	0.11	4	69.928					18508	
555 SP					35	48.106	0.38	3	69.982	-86 58	49.73	0.08	4	69.817					18508	
556	-69	17	8.7	G5	35	50.839	0.05	5	69.367	-68 40	29.67	0.26	5	69.367					18509	
557	+0	94	8.6	F5	35	51.359	0.18	2	71.733	+1 00	11.61	0.06	2	71.733			758		3265	
558	+28	103	4.52	G5	0	35	54.061	0.03	101	71.284	+29 02	20.60	0.05	98	71.277	19	759	126		80019
559	-46	169	7.35	F8	36	04.887	0.07	4	70.260	-46 10	36.00	0.13	4	70.260			765		71	
560	-38	198	8.9	F8	36	07.066	0.05	4	70.638	-38 16	25.01	0.15	4	70.638					3266	
561	-24	244	7.1	F5	36	07.270	0.12	4	69.951	-23 52	25.15	0.07	4	69.951					3267	
562	-15	116	9.0	K5	36	07.859	0.04	2	71.765	-14 30	28.37	0.02	2	71.765					3268	
563	-44	163	9.4	G5	0	36	13.473	0.11	4	71.075	-44 16	58.07	0.06	4	71.075					72
564	-41	168	8.3	K0	36	15.108	0.43	3	70.583	-40 44	55.16	0.23	3	70.583					73	
565	-21	85	8.7	F5	36	15.737	0.09	4	69.779	-21 18	53.07	0.05	4	69.779					3269	
566	-25	234	6.64	K0	36	20.044	0.16	4	70.313	-25 22	56.77	0.04	4	70.313			768		3270	
567	-19	93	8.4	F8	36	20.276	0.12	2	71.787	-19 08	33.27	0.02	2	71.787					3271	
568	-50	144	9.1	K0	0	36	23.265	0.12	4	70.968	-49 46	27.52	0.22	4	70.968					74
569	-36	219	8.2	G5	36	26.911	0.04	4	70.676	-36 13	07.45	0.40	4	70.676					3272	
570	-57	132	8.6	G5	36	28.086	0.05	4	69.730	-56 56	25.07	0.13	4	69.730					3273	
571	-43	167	7.58	K0	36	29.742	0.24	4	70.682	-43 34	13.39	0.15	4	70.682			772		75	
572	-81	8	9.0	F2	36	35.002	0.06	4	70.060	-81 27	07.73	0.16	4	70.060					18510	
572 SP					0	36	35.015	0.47	4	69.856	-81 27	07.51	0.43	4	69.856					18510
573	-43	170	8.9	K0	36	44.579	0.09	4	69.982	-42 55	36.16	0.08	4	69.982					76	
574	-2	84	8.2	F0	36	45.462	0.20	2	71.779	-2 14	31.43	0.20	2	71.779					3274	
575	-85	7	8.03	K5	36	47.116	0.10	4	69.933	-85 31	37.88	0.12	4	69.933			779		18511	
575 SP					36	46.989	0.09	4	70.226	-85 31	37.71	0.23	4	70.226			779		18511	

506 SDS, 9.8m, 2°6, 92°.
534 9.7m-10.3m, 0°5, 10°.

539 A 521AB, 9.4m-10.7

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
576	-53	138	9.1	K2	0 36 52.897	0.18	4	70.283	-52 52 46.21	0.16	4	70.283				3275
577	-63	66	9.5	K0	36 54.228	0.14	4	69.975	-63 05 23.46	0.09	4	69.975				3276
578	-30	186	7.9	K0	37 05.609	0.03	4	70.042	-30 05 40.93	0.10	4	70.042				3277
579	-8	110	8.2	G5	37 12.421	0.54	2	71.206	-8 16 47.30	0.03	2	71.206				3278
580	-24	255	8.7	K0	37 15.154	0.39	3	70.758	-24 27 32.95	0.43	3	70.758				3279
581	-60	45	9.5	A5	0 37 21.846	0.13	4	70.659	-59 47 17.10	0.32	4	70.659				3280
582	-68	24	8.8	K0	37 25.964	0.09	4	70.192	-67 50 56.10	0.26	4	70.192				18512
583	-38	205	8.6	A2	37 26.250	0.13	4	70.211	-37 40 57.51	0.10	4	70.211				3281
584	-8	113	8.2	K5	37 27.863	0.01	2	71.277	-8 08 46.80	0.13	2	71.277				3282
585	-3	80	8.8	K2	37 31.943	0.02	2	71.759	-3 02 38.98	0.40	2	71.759				3283
586	-14	110	8.3	K0	0 37 32.969	0.08	2	71.294	-14 09 32.92	0.00	2	71.294				3284
587	-26	206	8.1	K5	37 40.744	0.18	3	69.446	-26 19 25.88	0.07	3	69.446				3285
588	-52	74	8.47	K0	37 46.861	0.18	4	70.218	-52 01 09.94	0.10	4	70.218		794		3286
589	-55	141	9.0	F8	37 49.187	0.07	4	70.390	-54 52 19.81	0.20	4	70.390				3287
590f	-17	109	6.46	G5	37 58.146	0.15	2	71.247	-16 47 26.49	0.35	2	71.247		798	135	3288
591	-32	239	9.4	F5	0 38 02.728	0.13	4	70.462	-32 32 32.63	0.17	4	70.462				3289
592	-31	252	8.7	G5	38 03.792	0.09	4	69.684	-31 25 37.48	0.06	4	69.684				3290
593	-18	106	8.6	K0	38 08.661	0.05	2	71.680	-18 09 39.81	0.15	2	71.680				3291
594	-5	101	6.12	G5	38 09.541	0.12	6	69.153	-4 37 33.64	0.11	6	69.153	2042	804	137	32042
595	-16	115	8.9	K5	38 10.166	0.24	2	71.692	-15 35 59.71	0.03	2	71.692				3292
596f	-8	117	7.05	G0	0 38 15.207	0.14	2	70.772	-7 30 21.92	0.20	2	70.772		807		3293
597	+3	86	8.2	G5	38 15.307	0.21	3	71.060	+4 12 15.21	0.50	2	71.194				3294
598	-28	195	7.9	F8	38 20.152	0.08	4	69.020	-27 38 57.11	0.04	4	69.020				3295
599	-10	133	8.5	K0	38 22.080	0.07	2	71.744	-10 14 03.47	0.10	2	71.744				3296
600	-5	105	8.7	G0	38 24.136	0.05	2	71.266	-4 50 21.86	0.01	2	71.266				3297
601	-48	148	9.2	G5	0 38 28.540	0.17	4	69.957	-48 06 12.78	0.20	4	69.957				78
602	-33	250	9.3	G0	38 29.476	0.11	4	70.420	-33 01 31.53	0.06	4	70.420				3298
603*	-41	180	8.32	A0	38 30.781	0.13	4	70.243	-40 48 20.17	0.20	4	70.243		814		77
604	-39	165	8.1	G5	38 31.938	0.11	4	70.195	-39 31 52.98	0.24	4	70.195				3299
605	-68	25	8.38	A3	38 41.377	0.17	4	69.757	-68 27 38.69	0.21	4	69.757		820		18513
606	-66	46	9.4	K0	0 38 42.240	0.16	4	70.089	-66 07 53.81	0.13	4	70.089				18514
607	-35	211	9.8	G5	38 46.851	0.23	4	70.697	-34 48 30.40	0.04	4	70.697				3300
608	-39	167	9.3	K0	38 56.029	0.08	4	70.518	-38 57 10.99	0.24	4	70.518				3301
609	+23	94	5.98	A5p	38 56.725	0.09	7	70.345	+24 21 18.09	0.25	7	70.345	2044	822		32044
610	-13	117	8.5	K0	38 57.465	0.14	2	71.273	-12 57 52.88	0.24	2	71.273				3302
611	-46	180	4.65	K0	0 38 57.991	0.03	102	71.244	-46 21 33.21	0.03	99	71.286	1015	823	139	31015
612	-2	93	8.6	G0	38 59.378	0.07	2	71.774	-1 34 25.37	0.31	2	71.774				3303
613	+0	103	8.0	F0	39 00.017	0.02	2	71.248	+1 28 26.19	0.15	2	71.248				3304
614	-21	91	7.93	K2	39 00.312	0.09	4	68.988	-20 34 25.43	0.19	4	68.988		824		3305
615	-34	238	9.0	K	39 03.213	0.22	3	70.640	-34 00 31.53	0.05	3	70.640				3306
616	+2	89	8.8	K0	0 39 11.619	--	1	70.871	+3 22 07.14	--	1	70.871				3307
617	-42	223	8.8	G5	39 17.655	0.07	4	70.795	-42 17 23.73	0.15	4	70.795				79
618	-59	51	9.1	F8	39 17.741	0.06	4	70.003	-59 33 50.54	0.16	4	70.003				3308
619	-12	121	6.94	K0	39 43.129	0.25	2	70.814	-12 04 42.94	0.04	2	70.814		838	142	3309
620	-74	56	9.0	K0	39 44.224	0.14	4	69.484	-74 27 03.80	0.44	4	69.484				18515
621	-62	56	8.5	K2	0 39 54.981	0.16	4	69.742	-61 38 19.81	0.21	4	69.742				3310
622	-17	116	8.7	G0	40 05.937	0.12	2	71.833	-16 58 38.51	0.25	2	71.833				3311
623	+3	94	8.4	F8	40 08.948	0.36	2	72.104	+3 31 00.35	0.34	2	72.104				3312
624	-0	105	8.8	F8	40 09.019	0.31	2	72.138	+0 27 45.38	0.15	2	72.138				3313
625	-49	171	8.9	G5	40 09.521	0.15	4	70.709	-48 45 37.14	0.20	4	70.709				80
626	-36	241	7.21	M0	0 40 12.512	0.10	12	70.676	-36 17 46.22	0.10	11	70.652	1016	845	143	31016
627	-47	199	7.8	G5	40 15.725	0.21	4	70.535	-47 28 02.83	0.05	4	70.535				81
628	-59	52	8.6	K2	40 18.818	0.02	4	70.454	-58 54 00.73	0.27	4	70.454				3314
629	-66	47	5.46	F5	40 20.895	0.09	6	70.934	-65 44 32.25	0.15	6	70.934	2047	851	145	32047
630	-22	118	8.4	K0	40 21.502	0.10	3	69.388	-21 55 56.06	0.11	3	69.388				3315
631	-56	133	8.85	K5	0 40 26.613	0.18	4	70.639	-56 07 03.98	0.12	4	70.639		852		3316
632	-4	85	7.35	F2	40 28.803	0.22	2	71.725	-4 07 48.50	0.21	2	71.725		854		3317
633	-11	125	8.1	K5	40 30.675	0.01	2	71.792	-10 46 10.38	0.15	2	71.792				3318
634	-46	189	8.6	K0	40 33.501	0.14	4	70.207	-46 03 31.40	0.04	4	70.207				82
635	-7	109	7.52	K0	40 46.413	0.05	2	71.807	-6 36 38.32	0.15	2	71.807		857		3319
636	-43	196	8.9	K5	0 40 48.569	0.21	3	70.024	-43 29 25.76	0.03	3	70.024				83
637	+1	125	7.8	F0	40 49.377	0.03	2	72.100	+2 18 37.21	0.26	2	72.100				3320
638*	-33	267	9.0	G0	40 51.565	0.10	4	70.399	-33 13 18.37	0.10	4	70.399				3321
639	-23	268	8.7	K2	41 00.593	0.11	4	69.510	-22 54 37.91	0.17	4	69.510				3322
640	-44	183	8.0	K2	41 02.060	0.21	4	70.140	-44 23 48.78	0.19	4	70.140				84
641	-18	115	2.24	K0	0 41 05.158	0.03	83	71.362	-18 15 37.94	0.04	83	71.362	22	865	146	30022
642	-58	42	4.53	A0	41 06.762	0.04	38	70.992	-57 44 12.95	0.07	38	70.992	23	866	147	30023
643	-65	73	7.6	K0	41 09.179	0.12	4	69.777	-65 05 35.76	0.11	4	69.777				18516
644	-70	33	9.4	K0	41 13.628	0.11	4	69.777	-70 34 14.65	0.17	4	69.777				18517
645	-3	91	8.9	K0	41 16.961	0.28	2	72.111	-3 21 10.38	0.05	2	72.111				3323
646	-51	186	8.6	F2	0 41 17.407	0.06	4	69.921	-51 15 00.56	0.20	4	69.921				85
647	-61	34	9.2	F8	41 26.154	0.14	5	71.097	-60 57 32.50	0.27	5	71.097				3324
648	-25	280	8.3	G0	41 30.944	0.08	4	69.763	-25 08 45.40	0.16	4	69.763				3325
649	-11	128	4.93	K0	41 40.021	0.07	5	69.295	-10 52 55.67	0.14	5	69.295	2048	875		32048
650	-8	129	7.9	A3	41 41.544	0.16	2	71.724	-8 09 41.29	0.02	2	71.724				3326

590 9.1m, 5°0, 354°.

596 A 566, 10.4m, 7°7, 321°.

603 8.5m-10.7m, 0°5, 130°.

638 9.2m-11.2m, 1°8, 44°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
651	-39	181	5.97	K0	0	41	47.644	0.07	20	70.678	-38 41 46.35	0.06	20	70.678	26	879	150	30026	
652	-15	135	8.9	F8	41	47.815	0.12	2	72.241	-14 30 29.18	0.32	2	72.241					3327	
653	-0	108	8.9	K0	41	53.092	--	1	72.692	+0 15 05.74	--	1	72.692					3328	
654	-30	213	9.3	G0	41	54.489	0.17	4	70.497	-30 23 06.60	0.14	4	70.497					3329	
655	-27	223	7.73	G0	41	58.451	0.10	4	70.168	-26 47 25.61	0.15	4	70.168			883		3330	
656	-50	181	7.84	A0	0	42	02.612	0.06	4	70.417	-49 58 48.37	0.15	4	70.417			884		86
657	-54	164	9.2	K2	42	11.439	0.10	4	69.058	-54 27 04.96	0.26	4	69.058					3331	
658	-37	253	9.0	K0	42	11.865	0.10	4	70.764	-36 56 51.74	0.03	4	70.764					3332	
659	-16	126	9.1	K0	42	12.424	--	1	72.809	-15 39 35.62	--	1	72.809					3333	
660	-43	204	8.29	F2	42	14.225	0.05	4	70.687	-42 52 19.65	0.22	4	70.687			888		87	
661	-32	274	7.61	G5	0	42	19.602	0.14	3	70.195	-31 39 46.01	0.12	3	70.195			892		3334
662	+2	97	7.8	M0	42	20.803	0.19	2	71.814	+2 55 39.51	0.08	2	71.814					3335	
663	-18	120	9.0	K2	42	27.143	--	1	72.637	-17 30 27.07	--	1	72.637					3336	
664	-12	128	7.8	G5	42	28.575	0.01	2	71.824	-12 25 03.21	0.27	2	71.824			895		3337	
665	+4	109	8.0	A5	42	29.556	0.04	2	71.843	+4 54 30.00	0.04	2	71.843					3338	
666	-20	128	8.6	F8	0	42	30.196	0.37	2	72.526	-19 34 15.95	0.31	2	72.526					3339
667	-36	252	8.6	K0	42	32.943	0.09	4	70.279	-36 14 23.49	0.21	4	70.279					3340	
668	-28	225	8.5	K5	42	33.744	0.11	3	70.396	-28 07 35.45	0.15	3	70.396					3341	
669	-38	233	9.0	F5	42	34.350	0.09	3	71.276	-37 56 51.73	0.13	3	71.276					3342	
670	-71	26	8.28	F5	42	34.603	0.17	4	69.272	-71 26 31.73	0.31	4	69.272			899		18518	
671	-43	207	6.00	A5	0	42	35.264	0.04	39	71.182	-42 56 57.17	0.05	37	71.196	1017	900	153	31017	
672	-64	71	9.0	K0	42	39.428	0.29	4	69.976	-64 14 01.86	0.25	4	69.976					18519	
673	-54	166	6.32	F8	42	42.842	0.16	4	70.595	-53 59 18.09	0.24	4	70.595	2049	902			32049	
674	-5	119	8.8	K2	42	47.625	0.28	2	71.277	-5 16 57.18	0.35	2	71.277					3343	
675	-53	172	9.2	G0	42	49.456	0.14	4	70.424	-53 30 31.63	0.20	4	70.424					3344	
676	-51	191	8.8	K2	0	43	01.528	0.14	4	69.493	-50 54 01.22	0.05	4	69.493					88
677	-40	170	9.1	G0	43	05.149	0.09	3	70.305	-39 51 42.76	0.36	3	70.305					3345	
678	-47	210	9.7	G0	43	06.539	0.11	4	71.120	-46 49 20.49	0.26	4	71.120					89	
679	-24	305	8.5	G5	43	07.350	0.12	4	69.906	-23 43 24.50	0.19	4	69.906					3346	
680	-18	122	8.9	K0	43	09.600	0.09	2	71.750	-18 09 54.09	0.18	2	71.750					3347	
681	-1	94	8.8	F5	0	43	11.256	0.03	2	71.270	-1 27 29.11	0.21	2	71.270					3348
682	-17	132	6.32	F0	43	11.748	0.14	2	71.248	-16 41 49.85	--	1	71.582			913		3349	
683	-0	110	7.8	G5	43	20.501	0.00	2	71.218	+0 18 21.70	0.06	2	71.218					3350	
684	-48	175	7.85	G0	43	22.816	0.12	4	70.710	-48 34 26.74	0.09	4	70.710			917		90	
685	-57	157	9.3	K0	43	25.849	0.09	4	69.521	-57 35 00.11	0.28	4	69.521					3351	
686	-58	45	8.9	K5	0	43	28.513	0.10	4	69.521	-58 12 44.73	0.15	4	69.521					3352
687	-26	245	8.7	G5	43	34.850	0.11	4	69.955	-25 39 10.20	0.05	4	69.955					3353	
688	-9	150	8.9	K5	43	41.207	0.04	2	71.783	-8 36 16.70	0.09	2	71.783					3354	
689	-21	107	8.7	G5	43	42.252	0.11	4	70.260	-20 56 11.93	0.12	4	70.260					3355	
690	-22	248	8.4	F8	43	42.666	0.08	4	70.475	-22 30 52.74	0.11	4	70.475					3356	
691	-12	132	7.6	G5	0	43	42.854	0.01	2	71.289	-11 43 30.36	0.21	2	71.289					3357
692	-80	12	8.7	K0	43	43.309	0.18	5	69.719	-79 56 14.21	0.16	4	69.450					18520	
692 SP					43	43.089	0.12	4	69.278	-79 56 14.30	0.39	4	69.278					18520	
693	-7	117	8.7	F5	43	43.834	0.06	2	71.277	-6 50 21.70	0.08	2	71.277					3358	
694	-31	284	9.4	K0	43	47.057	0.17	3	70.008	-30 57 27.28	0.04	3	70.008					3359	
695	-10	159	8.6	K0	0	43	59.618	0.33	2	71.753	-9 50 49.88	0.05	2	71.753					3360
696	-29	219	8.6	G5	44	04.694	0.09	4	69.547	-28 49 34.60	0.19	4	69.547					3361	
697	-5	124	7.70	G5	44	07.766	0.10	2	71.699	-4 41 52.65	0.01	2	71.699			930		3362	
698	-14	133	8.9	K0	44	11.942	0.14	2	72.100	-14 02 02.89	0.01	2	72.100					3363	
699	+1	137	8.9	K0	44	11.989	0.09	2	72.046	+2 05 02.33	0.10	2	72.046					3364	
700	-20	131	8.8	F2	0	44	12.486	0.09	4	70.666	-20 13 43.58	0.19	4	70.666					3365
701	+0	118	8.6	K0	44	13.403	0.02	2	71.765	+1 16 16.21	0.26	2	71.765					3366	
702	-62	63	8.4	G5	44	20.685	0.08	4	69.746	-62 20 57.43	0.18	4	69.746					3367	
703	+11	96	5.68	G5	44	24.816	0.10	6	69.613	+11 42 04.61	0.17	6	69.613	2050	935			32050	
704	-35	253	9.1	G0	44	26.869	0.15	4	70.184	-34 36 10.57	0.07	4	70.184					3368	
705	-19	118	8.7	K0	0	44	29.247	0.03	2	71.814	-19 11 00.40	0.21	2	71.814					3370
706	-39	189	8.3	K0	44	29.259	0.09	4	70.227	-39 12 59.43	0.12	4	70.227					3369	
707	-72	64	9.2	K2	44	29.454	0.17	4	69.753	-72 03 19.42	0.19	4	69.753					18521	
708	-52	90	8.59	K0	44	29.852	0.21	5	70.504	-52 16 36.50	0.05	4	70.926			936		3371	
709	-24	321	7.4	A5	44	31.987	0.21	5	71.175	-24 29 21.76	0.09	5	71.175					3372	
710	+18	101	6.06	A5	0	44	34.941	0.11	6	69.553	+19 18 21.19	0.17	6	69.553	2051	938			32051
711	-42	256	9.52	K0	44	40.273	0.03	3	69.843	-42 07 08.60	0.03	3	69.843			939		91	
712	+23	106	4.30	K0	44	40.815	0.03	62	70.814	+23 59 42.19	0.05	61	70.812	27	940	156		80027	
713	-63	76	8.0	K0	44	45.806	0.08	4	69.444	-62 59 57.48	0.14	4	69.444					3373	
714	-3	99	7.34	K5	45	03.689	0.24	2	72.516	-2 35 40.02	0.16	2	72.516			944		3374	
715	-27	243	8.4	F0	0	45	13.996	0.19	4	70.696	-27 14 54.51	0.15	4	70.696					3375
716	-6	139	8.2	K0	45	19.802	--	1	71.844	-6 15 55.05	--	1	71.844			953		3376	
717	+4	122	8.8	K2	45	27.537	--	1	72.624	+4 49 51.11	--	1	72.624					3377	
718	-34	289	8.8	K5	45	3													

682 A 636, 9.4m, 2nd S, 195°.690 9.3m-9.3m, 0th S, 28°.

CATALOG OF 23,001 STARS FOR 1950.0

245

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
725	-1	102	8.0	K0	0 45 46.592	0.13	2	72.170	-0 45 41.35	0.25	2	72.170				3383
726	-44	206	9.2	G0	45 50.812	0.15	4	71.125	-44 02 43.23	0.21	4	71.125				92
727	-45	248	8.2	K0	45 51.964	0.08	4	70.808	-45 09 18.66	0.08	4	70.808				93
728	-15	146	8.2	K0	46 03.235	--	1	72.798	-15 01 23.59	--	1	72.798				3384
729	-27	250	8.0	K0	46 04.449	0.19	3	69.644	-26 38 30.64	0.06	3	69.644				3385
730	-18	130	8.1	K0	0 46 14.441	--	1	72.836	-17 49 10.34	--	1	72.836				3386
731	-29	225	6.66	F0	46 14.806	0.11	6	70.918	-28 46 02.92	0.09	6	70.918	2052	966		32052
732	-54	180	8.14	K0	46 17.527	0.06	4	69.259	-53 36 17.87	0.15	4	69.259		967		3387
733	-60	54	9.2	K0	46 20.181	0.17	4	69.755	-59 58 24.38	0.09	4	69.755				3388
734	+16	76	5.23	F5	46 20.790	0.03	67	70.896	+16 40 11.52	0.03	67	70.896	1020	968	165	81020
735	-35	272	9.0	K0	0 46 26.331	0.12	5	71.364	-35 11 16.31	0.25	5	71.364				3389
736	-49	210	8.2	A5	46 32.322	0.10	4	71.260	-48 51 57.34	0.16	4	71.260				94
737	-36	274	7.60	G5	46 37.131	0.11	4	70.260	-36 32 09.82	0.08	4	70.260		974		3390
738	-47	229	6.24	K0	46 37.704	0.14	6	70.239	-46 58 12.95	0.05	6	70.239	2053	975	166	32053
739	-21	119	7.05	G5	46 37.883	0.09	4	70.444	-21 25 23.34	0.07	4	70.444		976		3391
740	-6	141	8.8	K0	0 46 42.529	0.23	2	72.246	-6 26 32.24	0.02	2	72.246				3392
741	-61	37	8.06	A3	46 43.250	0.04	4	70.526	-60 38 32.87	0.09	4	70.526		979		3393
742	-2	111	8.5	A3	46 44.465	0.10	2	71.315	-1 53 54.08	0.65	2	71.315				3394
743	-75	64	4.96	K5	46 52.424	0.04	50	70.838	-75 11 44.20	0.05	49	70.839	31	983	167	30031
743 SP					46 52.416	0.06	49	71.062	-75 11 44.50	0.11	49	71.062	31	983	167	50031
744	-14	145	5.84	K2	0 46 55.054	0.11	5	70.330	-13 49 57.80	0.07	5	70.330	2054	984	168	32054
745	-48	190	9.3	G5	46 55.826	0.17	4	70.311	-47 41 08.69	0.14	4	70.311				95
746	-0	117	8.9	G5	47 01.206	0.02	2	72.190	+0 18 57.43	0.02	2	72.190				3395
747	-43	229	8.9	G5	47 02.992	0.22	4	70.425	-42 37 15.51	0.18	4	70.425				96
748	-11	149	7.8	K0	47 03.552	--	1	72.564	-11 14 01.40	--	1	72.564				3396
749	-69	26	8.2	K2	0 47 10.711	0.12	4	70.290	-69 23 56.38	0.03	4	70.290				18522
750	-8	145	8.0	K0	47 12.619	0.05	2	72.133	-8 07 17.39	0.04	2	72.133		994		3397
751	-21	123	8.6	K2	47 14.407	0.05	4	70.451	-21 24 03.43	0.04	4	70.451				3398
752	-56	157	9.4	M2	47 16.339	0.11	3	70.471	-56 02 12.86	0.50	3	70.471				3399
753	-1	104	6.80	K0	47 21.225	0.08	2	71.299	-0 29 46.21	0.01	2	71.299		997	171	3400
754	-55	164	9.4	K2	0 47 34.148	0.07	4	70.719	-54 51 57.36	0.21	4	70.719				3401
755	-74	68	8.78	K0	47 36.423	0.25	4	70.245	-73 45 03.12	0.12	4	70.245		1002		18523
756	-11	153	5.24	F5	47 36.959	0.03	48	71.352	-10 54 52.69	0.06	46	71.370	30	1003	173	30030
757	-29	232	8.8	K5	47 42.485	0.20	4	70.707	-29 16 35.14	0.09	4	70.707				3402
758	-10	169	8.9	K2	47 44.877	0.01	2	72.134	-10 10 42.79	0.08	2	72.134				3403
759	-41	215	8.90	G0	0 47 45.879	0.11	4	70.418	-40 53 31.84	0.12	4	70.418		1008		97
760	-46	223	8.7	G5	47 46.228	0.10	4	70.383	-46 12 41.12	0.14	4	70.383				98
761	-16	142	8.0	K0	47 46.721	0.22	2	71.710	-16 09 01.98	0.15	2	71.710				3404
762	+2	114	8.6	M0	47 49.929	0.07	2	71.746	+3 06 34.14	0.02	2	71.746		1009		3405
763	-6	148	8.0	F0	47 59.236	0.21	2	71.796	-5 35 10.32	0.11	2	71.796				3406
764	-19	133	8.7	G0	0 48 11.012	0.14	2	71.807	-18 46 39.67	0.00	2	71.807				3407
765	-2	112	8.4	F8	48 14.232	0.05	2	70.788	-2 11 36.33	0.33	2	70.788				3408
766	-15	152	8.6	K0	48 15.118	0.07	2	71.676	-15 06 33.11	0.08	2	71.676				3409
767	-66	63	9.8	G0	48 24.547	0.06	4	69.789	-66 28 31.68	0.34	4	69.789				18524
768	-51	209	5.22	F5	48 24.968	0.11	6	69.528	-51 15 33.10	0.17	6	69.528	2056	1019	176	32056
769	-42	282	9.1	F8	0 48 25.830	0.09	3	69.727	-41 49 40.09	0.21	3	69.727				99
770	+1	149	7.3	G0	48 30.039	0.10	3	71.068	+2 28 19.92	0.41	2	71.206				3410
771	-57	174	8.8	K2	48 39.197	0.18	4	69.993	-57 17 55.50	0.05	4	69.993				3411
772	+2	118	6.51	G5	48 43.716	0.02	2	71.238	+3 06 49.03	0.11	2	71.238		1026		3412
773	-13	142	8.8	G0	48 46.754	0.22	2	71.243	-13 23 11.77	0.09	2	71.243				3413
774	-10	173	7.06	F2	0 48 48.598	0.21	2	71.728	-9 40 38.50	0.11	2	71.728		1027		3414
775	-30	258	9.4	K2	48 50.688	0.10	4	70.445	-29 57 41.63	0.08	4	70.445				3415
776	-34	310	8.3	K0	48 50.905	0.14	4	70.581	-34 21 20.55	0.11	4	70.581				3416
777	+0	130	8.6	G0	48 52.090	0.15	2	71.218	+0 38 18.73	0.28	2	71.218				3417
778	-3	113	7.03	A0	48 59.733	0.08	2	71.313	-3 24 52.92	0.36	2	71.313		1030		3418
779	-24	365	7.9	G5	0 49 03.996	0.08	4	69.922	-23 51 04.11	0.16	4	69.922				3419
780	-9	171	7.8	K0	49 05.765	0.02	2	71.706	-9 05 24.73	0.02	2	71.706				3420
781	-39	210	9.0	G0	49 14.174	0.10	4	69.991	-38 45 45.67	0.11	4	69.991				3421
782	-47	247	8.5	G5	49 20.884	0.09	3	70.381	-46 57 37.91	0.07	3	70.381				100
783	+3	115	8.0	F2	49 21.398	0.10	2	71.813	+3 47 19.51	0.03	2	71.813				3422
784	-7	130	8.9	K5	0 49 22.872	0.33	2	72.210	-7 23 47.61	0.18	2	72.210				3423
785	-25	328	8.6	K0	49 23.340	0.05	4	70.297	-25 27 50.61	0.14	4	70.297				3424
786	-64	83	9.0	F5	49 24.811	0.26	4	70.193	-63 58 08.88	0.11	4	70.193				3425
787	-50	221	8.9	F2	49 28.428	0.05	4	70.295	-50 25 26.41	0.24	4	70.295				101
788	-31	319	9.2	A5	49 29.566	0.17	2	68.890	-31 13 48.89	0.23	2	68.890				3426
789	-28	265	8.5	K0	0 49 32.509	0.03	3	70.485	-27 53 46.25	0.27	3	70.485				3427
790	-57	179	8.27	F8	49 39.460	0.15	4	70.497	-56 51 00.91	0.15	4	70.497		1040		3428
791	-36	296	8.7	A0	49 43.112	0.13	4	70.408	-36 01 09.29	0.10	4	70.408				3429
792	-12	154	8.7	F8	49 43.804	0.00	2	72.444	-12 08 28.97	0.23	2	72.444				3430
793	-27	277	8.5	K0	49 51.876	0.07	2	71.337	-26 40 11.38	0.32	2	71.337				3431
794	-20	149	8.1	K2	0 50 02.961	0.21	3	71.343	-20 10 00.03	0.30	3	71.343				3434
795	-59	60	8.9	K0	50 03.061	0.15	4	70.677	-59 16 27.27	0.38	4	70.677				3432
796	-54	196	9.3	G5	50 03.124	0.03	4	71.275	-53 38 26.15	0.11	4	71.275				3433
797	-85	12	8.74	F5	50 15.031	0.12	4	69.809	-85 12 25.65	0.16	4	69.809		1052		18525
797 SP					50 14.667	0.21	4	70.201	-85 12 25.54	0.08	4	70.201		1052		18525

787 9.4m-9.5m, 0°6, 34°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
798	-3	119	8.8	K0	0 50 20.505	-	1	71.932	-2 54 59.15	-	1	71.932				3435
799	-68	31	9.1	G5	50 24.232	0.16	4	70.711	-68 26 19.77	0.15	4	70.711				18526
800	-62	70	8.8	K0	50 25.673	0.13	3	71.041	-61 50 04.91	0.16	3	71.041				3436
801	-1	114	4.92	K0	50 27.052	0.04	35	70.955	-1 24 55.66	0.05	35	70.955	1022	1055	179	81022
802	-51	220	8.5	K2	50 31.087	0.11	4	70.767	-51 18 46.64	0.06	4	70.767				102
803	-70	38	7.98	F8	0 50 34.752	0.14	3	70.146	-69 46 25.93	0.12	3	70.146		1059		18527
804	-44	228	8.9	G5	50 35.261	0.13	4	70.740	-44 10 56.30	0.06	4	70.740				103
805	-43	250	9.1	K0	50 49.421	0.04	2	70.750	-43 04 44.22	0.22	2	70.750				104
806	-64	86	9.0	G5	51 00.092	0.17	3	70.422	-64 26 06.02	0.28	3	70.422				18528
807	-39	217	8.6	A5	51 03.653	0.17	5	70.933	-39 20 20.81	0.11	5	70.933				3438
808	-22	150	8.4	G5	0 51 06.999	0.06	3	71.449	-22 28 25.95	0.18	3	71.449				3440
809	-5	147	6.64	G5	51 08.607	-	1	71.699	-4 47 47.71	-	1	71.699		1073		3441
810	-14	162	7.54	G0	51 12.164	-	1	71.942	-14 11 29.27	-	1	71.942		1074		3442
811	-38	293	8.7	K0	51 17.625	0.08	4	70.672	-38 14 29.22	0.11	4	70.672				3443
812	-30	269	8.9	F0	51 23.693	0.13	3	70.167	-30 26 55.94	0.23	3	70.167				3444
813	-29	255	8.1	K5	0 51 23.832	0.10	3	70.954	-28 48 56.31	0.17	3	70.954				3445
814	-37	319	8.6	F5	51 32.092	0.08	4	70.995	-37 21 03.69	0.20	4	70.995				3446
815	-63	83	5.64	M3	51 33.622	0.10	6	69.977	-63 08 33.13	0.06	6	69.977	2057	1078	181	32057
816	-16	152	8.0	K0	51 37.522	0.06	2	72.115	-16 26 46.06	0.10	2	72.115				3447
817	-33	337	7.87	F2	51 39.871	0.16	4	71.267	-32 36 21.10	0.06	4	71.267		1079		3448
818	-74	72	8.49	F8	0 52 01.016	0.06	4	71.140	-74 08 25.97	0.08	4	71.140		1085		18529
819	-36	312	9.3	F5	52 01.663	0.05	4	71.255	-35 40 19.29	0.09	4	71.255				3449
820	-58	55	7.37	K0	52 05.330	0.17	4	70.798	-57 40 26.72	0.20	4	70.798		1087		3450
821	-49	247	7.77	F2	52 07.592	0.11	4	70.636	-49 13 08.53	0.37	4	70.636		1088		105
822	-22	155	8.4	K2	52 11.891	0.22	3	70.184	-21 44 38.26	0.22	3	70.184				3451
823	-24	389	8.4	K0	0 52 16.203	0.23	4	70.207	-24 11 27.23	0.11	4	70.207				3452
824	+0	142	8.6	G5	52 27.469	0.22	2	70.784	+0 31 09.27	0.13	2	70.784				3453
825	-79	22	9.5	K2	52 30.051	0.13	4	70.477	-79 26 34.28	0.19	4	70.477				18530
825	SP				52 30.074	0.19	3	69.960	-79 26 33.71	0.66	4	69.839				18530
826	-2	124	8.6	K0	52 40.294	-	1	71.926	-1 46 26.38	-	1	71.926				3454
827	-45	290	7.4	K0	0 52 40.419	0.18	4	69.930	-45 29 26.22	0.14	4	69.930				106
828	-78	25	9.0	K0	52 47.999	0.14	5	70.592	-78 07 45.34	0.18	5	70.592				18531
828	SP				52 47.808	0.05	4	71.028	-78 07 45.78	0.14	4	71.028				18531
829	-25	355	7.34	G5	52 56.140	0.18	4	69.541	-24 55 50.70	0.14	4	69.541		1101		3455
830	-0	139	7.7	K0	52 59.471	0.15	2	71.705	-0 15 02.19	0.31	2	71.705				3456
831	-11	171	8.8	K0	0 53 02.373	0.16	2	71.218	-11 00 46.77	0.05	2	71.218				3457
832	-70	40	5.34	K0	53 08.630	0.02	115	71.284	-69 47 51.14	0.03	113	71.290	34	1102	184	30034
833	-8	165	8.5	F0	53 08.989	0.13	2	71.720	-8 19 25.52	0.13	2	71.720				3458
834	-4	112	8.7	A0	53 09.228	0.04	2	71.238	-4 15 48.53	0.03	2	71.238				3459
835	-8	167	6.00	K2	53 10.698	0.11	6	70.608	-7 37 02.69	0.13	6	70.608	2058	1103		32058
836	+3	127	8.7	K2	0 53 13.284	0.16	3	72.076	+4 14 27.91	0.47	3	72.076				3460
837	+26	151	5.94	A2	53 16.741	0.12	6	70.095	+26 56 19.33	0.10	6	70.095	2059	1105		32059
838	-18	152	8.3	K0	53 21.101	0.06	2	71.720	-17 34 45.64	0.28	2	71.720				3461
839	-55	183	9.2	F0	53 22.604	0.15	3	69.323	-55 16 30.93	0.16	3	69.323				3462
840	-19	144	8.4	K2	53 24.936	0.01	2	71.236	-19 02 04.00	0.09	2	71.236				3463
841	-4	114	7.3	F5	0 53 29.403	0.21	2	70.720	-4 00 30.39	0.02	2	70.720				3464
842	-21	136	8.6	F8	53 36.075	0.08	4	69.221	-20 58 21.24	0.15	4	69.221				3465
843	-10	191	8.9	G0	53 44.255	0.01	2	71.733	-10 04 41.00	0.01	2	71.733				3466
844	-20	167	7.93	A0	54 02.157	0.04	2	71.197	-19 42 51.62	0.16	2	71.197			190	3467
845	-15	171	8.7	F2	54 03.426	0.04	2	71.235	-14 56 08.63	0.66	2	71.235				3468
846	-83	16	8.37	M0	0 54 03.888	0.12	5	70.339	-82 56 24.04	0.06	5	70.339		1125		18532
846	SP				54 03.779	0.21	4	69.690	-82 56 24.00	0.14	4	69.690		1125		18532
847	-3	132	6.97	F0	54 13.927	0.20	2	70.796	-2 59 59.02	0.03	2	70.796		1126		3469
848	-35	320	8.8	F5	54 22.122	0.10	4	69.992	-34 56 09.25	0.19	4	69.992				3470
849	-60	60	9.2	M2e	54 23.121	0.04	4	69.004	-59 56 36.69	0.09	4	69.004				3471
850	-39	236	8.7	G5	0 54 23.333	0.13	4	70.785	-39 12 09.98	0.08	4	70.785				3472
851	+22	153	4.62	G5	54 31.785	0.17	5	69.042	+23 08 52.66	0.19	5	69.042	2060	1136		32060
852	-47	280	7.9	K2	54 36.456	0.04	4	70.188	-47 08 03.39	0.13	4	70.188				107
853	-61	48	8.7	K0	54 38.078	0.04	4	69.488	-60 50 25.58	0.10	4	69.488				3473
854	-0	146	7.71	G5	54 39.241	0.37	2	71.296	+0 04 20.15	0.29	2	71.296			191	3474
855	-34	360	8.8	K0	0 54 43.015	0.11	4	70.436	-34 08 24.34	0.15	4	70.436				3475
856	-6	170	8.3	G5	54 46.695	0.07	2	71.759	-6 22 48.57	0.02	2	71.759				3476
857	-15	175	8.8	G5	55 03.484	0.22	2	71.305	-15 08 44.41	0.28	2	71.305				3477
858	+0	149	7.29	G5	55 05.415	0.04	2	71.740	+1 30 55.61	0.13	2	71.740		1146	192	3478
859	-13	164	8.1	K2	55 05.439	0.12	2	71.755	-12 30 56.91	0.23	2	71.755				3479
860	+28	157	5.64	K0	0 55 07.399	0.05	25	70.848	+28 43 20.25	0.09	25	70.848	1023	1148	193	31023
861	-49	262	8.8	F5	55 12.052	0.11	4	70.294	-49 00 46.33	0.09	4	70.294				108
862	-16	161	8.0	F0	55 14.745	-	1	70.833	-16 03 24.43	-	1	70.833		1150		3480
863*	-41	241	8.56	G0	55 15.408	0.12	4	71.031	-41 31 34.23	0.15	4	71.031		1152		109
864	-31	376	8.3	K2	55 16.268	0.11	4	69.525	-30 45 28.23	0.06	4	69.525				3481
865	-48	226	8.8	K0	0 55 18.450	0.20	4	70.493	-47 50 05.58	0.14	3	70.344				110
866	-52	127	8.09	G5	55 25.372	0.13	4	69.378	-52 32 10.56	0.07	4	69.378		1158		3482
867	-23	367	7.8	K5	55 33.519	0.10	4	69.508	-22 51 55.64	0.07	4	69.508				3483
868	-3	135	8.5	K0	55 39.510	0.19	2	71.824	-2 50 38.33	0.18	2	71.824				3484
869	-21	142	8.7	F5	55 41.445	0.03	3	70.504	-21 26 57.50	0.19	3	70.504				3485

863 8.7m-10.4m, 0°3', 96°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
870	+ 3	131	8.1	A5	0 55 43.827	0.03	2	71.269	+ 4 01 36.83	0.05	2	71.269				3486
871	-26	314	7.96	K0	55 46.670	0.07	3	70.368	-26 08 47.28	0.09	3	70.368		1166		3487
872	-44	259	8.4	F5	55 48.009	0.09	4	70.274	-44 24 11.69	0.12	4	70.274				111
873	-64	96	7.7	G5	55 49.414	0.15	4	69.541	-64 02 39.36	0.26	4	69.541				3488
874	-37	353	9.3	F5	55 49.755	0.17	4	71.081	-37 31 09.61	0.13	4	71.081				3489
875	-27	308	7.7	K2	0 55 51.637	0.20	4	69.701	-27 21 43.95	0.23	4	69.701				3490
876	-40	214	9.0	K0	55 52.006	0.13	5	71.317	-40 14 06.03	0.08	5	71.317				112
877	-66	74	8.4	K2	55 55.334	0.05	4	69.707	-66 02 26.96	0.11	4	69.707				18533
878	-44	261	8.8	G5	55 55.913	0.22	4	70.492	-43 36 51.32	0.03	4	70.492				113
879	-77	37	7.46	G5	55 56.918	0.15	4	69.903	-76 49 26.93	0.13	4	69.903		1171		18534
879 SP					0 55 56.925	0.16	4	69.763	-76 49 26.28	0.25	4	69.763		1171		18534
880	-36	348	9.3	K1	55 57.940	0.34	3	70.449	-35 45 12.88	0.15	3	70.449				3491
881	-71	33	8.8	M1	56 04.956	0.12	4	70.251	-70 43 42.50	0.13	4	70.251				18535
882	-30	297	4.39	B5	56 11.917	0.03	45	70.849	-29 37 38.02	0.05	45	70.849	35	1172	195	30035
883	- 6	176	6.70	K0	56 13.728	0.02	109	71.104	- 6 09 06.71	0.03	107	71.107	1024	1174	196	81024
884	-14	174	8.8	F2	0 56 19.373	0.30	2	72.212	-13 55 49.62	0.15	2	72.212				3492
885	- 3	136	7.8	K2	56 30.024	0.05	2	71.835	- 2 43 22.92	0.16	2	71.835				3493
886	-51	237	7.34	K2	56 31.246	0.16	5	70.723	-51 32 05.94	0.25	5	70.723		1180		114
887	- 0	149	8.5	K0	56 33.420	0.13	2	72.100	- 0 24 52.17	0.21	2	72.100				3494
888	-63	92	8.2	K2	56 43.283	0.29	4	70.281	-62 43 17.35	0.23	4	70.281				3495
889	-42	340	8.7	G0	0 56 46.395	0.09	4	70.149	-42 00 40.66	0.14	4	70.149				115
890	+ 0	159	7.78	K0	56 49.412	0.28	2	71.280	+ 0 30 36.46	0.15	2	71.280		1185		3496
891	- 5	166	7.8	K0	57 09.713	0.20	2	71.302	- 4 35 27.39	0.03	2	71.302				3497
892	-59	64	7.7	K0	57 12.581	0.06	4	69.761	-58 40 26.69	0.07	4	69.761				3498
893	- 9	196	7.50	G5	57 19.552	0.04	2	71.799	- 8 35 34.38	0.12	2	71.799		1194		3499
894	-32	396	7.4	K0	0 57 20.935	0.15	3	70.149	-31 36 20.20	0.18	3	70.149				3500
895	- 5	168	8.3	G5	57 21.323	0.03	2	72.163	- 5 27 11.53	0.06	2	72.163				3501
896	-25	388	8.3	K0	57 24.356	0.01	3	69.751	-24 49 17.80	0.24	3	69.751				3502
897	-18	162	8.7	G5	57 29.610	0.46	2	72.121	-18 19 52.17	0.10	2	72.121				3503
898	-54	226	9.4	G5	57 30.101	0.16	4	69.797	-54 24 29.87	0.15	4	69.797				3504
899	+ 1	185	8.0	K5	0 57 31.167	0.10	2	71.291	+ 2 21 49.36	0.20	2	71.291				3505
900	-46	278	8.5	K0	57 31.499	0.20	4	70.736	-46 11 06.34	0.18	4	70.736				116
901	-50	270	7.33	M0	57 37.913	0.07	4	69.925	-50 01 12.23	0.15	4	69.925		1199		117
902	-51	241	7.64	K0	57 57.913	0.09	4	70.666	-50 47 37.07	0.16	4	70.666		1204		118
903	-12	183	8.3	M3	58 00.369	0.34	2	71.228	-12 27 52.40	0.03	2	71.228				3506
904	-67	65	8.75	G5	0 58 03.480	0.34	4	70.501	-67 31 16.59	0.19	4	70.501		1207		18536
905	-62	78	9.3	G0	58 04.750	0.10	4	70.971	-61 43 25.03	0.31	4	70.971				3507
906	- 2	140	7.04	M3	58 07.158	0.20	2	71.258	- 1 55 39.05	0.09	2	71.258		1209		3508
907	-18	163	8.4	F0	58 10.198	0.03	2	71.679	-18 23 17.71	0.09	2	71.679				3509
908	-20	181	7.4	K0	58 12.612	0.09	4	69.753	-20 21 33.59	0.18	4	69.753				3510
909	-36	367	7.00	K0	0 58 14.076	0.14	4	69.990	-36 30 26.82	0.15	4	69.990		1213	200	3511
910	-57	213	7.76	G5	58 14.465	0.16	4	70.673	-57 11 56.39	0.26	4	70.673		1214		3512
911	-76	82	9.21	F8	58 15.327	0.18	3	70.159	-76 04 59.26	0.27	3	70.159		1215		18537
911 SP					58 15.272	0.28	4	70.307	-76 04 58.71	0.04	4	70.307		1215		18537
912	+ 4	155	8.0	F5	58 15.442	--	1	71.574	+ 4 33 53.65	--	1	71.574				3513
913	- 1	131	8.5	K2	0 58 16.228	0.13	2	71.277	- 1 17 27.03	0.09	2	71.277		1216		3514
914	-10	209	7.60	A3	58 19.221	0.04	2	71.250	- 9 38 33.62	0.27	2	71.250		1217		3515
915	-60	66	9.21	A0	58 24.200	0.10	4	70.039	-60 32 10.77	0.04	4	70.039		1218		3516
916	+ 2	143	8.8	K2	58 35.190	0.07	2	71.806	+ 3 09 39.27	0.07	2	71.806				3517
917	-39	258	9.6	K1	58 35.627	0.06	4	70.424	-38 45 37.49	0.12	4	70.424				3518
918	-19	155	7.6	K0	0 58 39.105	0.02	2	71.769	-19 06 31.19	0.14	2	71.769				3519
919	-33	375	9.4	K0	58 39.239	0.10	4	70.490	-32 59 12.62	0.11	4	70.490				3520
920	-58	64	8.9	K5	58 40.317	0.10	4	70.239	-57 59 17.33	0.08	4	70.239				3521
921	-55	202	9.4	K0	58 44.929	0.20	4	70.728	-55 32 59.78	0.28	4	70.728				3522
922	-29	298	8.6	K0	58 51.473	0.21	4	69.786	-29 09 11.81	0.15	4	69.786				3523
923	-17	177	8.8	F0	0 58 51.528	0.02	2	71.791	-16 33 47.81	0.11	2	71.791				3524
924	-75	70	9.2	K2	58 54.526	0.02	4	70.986	-75 35 11.50	0.10	4	70.986				18538
924 SP					58 54.316	0.56	4	69.861	-75 35 11.18	0.36	4	69.861				18538
925	+ 4	157	8.6	K2	58 56.655	0.17	2	72.133	+ 4 51 57.25	0.18	2	72.133				3525
926	-39	260	5.57	K0	58 58.378	0.11	6	69.048	-39 11 09.13	0.15	6	69.048	2064	1229	201	32064
927	-34	387	7.75	K0	0 58 59.794	0.27	5	71.125	-33 37 44.08	0.26	5	71.125		1230		3526
928	-52	136	9.5	K2	59 00.035	0.03	3	70.741	-52 05 25.31	0.37	3	70.741				3527
929	- 7	159	7.26	K2	59 02.627	0.02	2	71.781	- 7 04 05.64	0.30	2	71.781			202	3528
930	-13	179	8.8	K2	59 02.703	--	1	72.687	-12 40 30.14	--	1	72.687				3529
931	-17	180	6.58	G5	59 09.861	0.05	24	70.886	-16 32 01.11	0.07	24	70.886	1025	1236	203	31025
932	- 4	129	9.0	K5	0 59 10.488	--	1	72.836	- 3 52 10.58	--	1	72.836				3530
933	-54	233	8.4	K5	59 15.468	0.12	5	70.964	-53 50 42.44	0.23	5	70.964				3531
934	-73	59	8.03	K0	59 15.857	0.04	4	70.503	-72 57 59.08	0.03	4	70.503		1238		18539
935	-24	448	8.05	K2	59 22.703	0.27	3	70.122	-23 39 21.15	0.29	3	70.122		1240		3532
936	-53	232	8.3	G5	59 38.653	0.40	3	70.142	-53 25 36.83	0.30	3	70.142				3533
937	-11	191	7.8	K0	0 59 47.127	--	1	70.912	-10 55 57.95	--	1	70.912				3534
938	-72	76	7.61	K0	59 52.164	0.14	4	70.579	-71 49 04.73	0.13	4	70.579		1247		18540
939	-57	220	6.00	K0	59 55.221	0.08	29	70.387	-57 16 16.32	0.06	29	70.387	1027	1250	204	31027
940	- 8	182	9.0	K2	59 56.281	--	1	71.511	- 8 17 38.93	--	1	71.511				3535
941	-66	79	8.7	G5	59 59.032	0.07	4	70.476	-65 55 21.06	0.12	4	70.476				18541

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
942	-45°	336	7.6	F0	0 59 59.660	0.02	3	71.036	-45° 26' 26.09	0.13	3	71.036				119
943	-31	411	9.2	K0	1 00 00.832	0.13	3	69.715	-30 39 38.35	0.32	3	69.715				3536
944	-32	410	5.52	A2	00 03.363	0.04	50	70.716	-31 49 14.42	0.03	50	70.716	1026	1252	205	31026
945	-35	350	9.0	K0	00 13.163	0.07	4	71.226	-34 38 19.52	0.16	4	71.226				3537
946	+ 7	153	4.45	K0	00 20.591	0.03	71	70.899	+ 7 37 17.53	0.04	71	70.899	36	1258	206	80036
947	-39	271	9.4	G0	1 00 31.528	0.14	3	70.372	-38 50 24.71	0.22	3	70.372				3538
948	-37	379	8.46	G	00 32.377	0.21	4	70.516	-37 33 09.80	0.12	4	70.516				3539
949	-47	313	5.34	K0	00 34.167	0.23	5	71.287	-46 39 56.96	0.14	5	71.287	2065	1266		32065
950	-59	67	8.5	K2	00 34.926	0.10	4	70.265	-59 27 40.35	0.12	4	70.265				3540
951	-56	208	8.10	K2	00 45.099	0.09	4	70.206	-56 19 22.99	0.12	4	70.206				3541
952	-52	139	8.3	K0	1 00 45.458	0.15	4	70.310	-52 05 28.84	0.18	4	70.310				3542
953	-64	107	8.7	K0	00 45.942	0.07	4	70.010	-64 15 10.77	0.13	4	70.010				18542
954	-27	341	8.4	K2	00 47.624	0.21	5	70.592	-27 22 35.07	0.11	5	70.592				3543
955	-26	343	7.8	G5	00 50.642	0.22	4	70.680	-26 26 52.39	0.19	4	70.680				3544
956	- 2	154	8.7	F5	00 52.447	0.01	2	72.187	- 1 45 48.59	0.01	2	72.187				3545
957	-41	260	7.16	K5	1 01 00.338	0.20	4	70.458	-41 17 21.49	0.18	4	70.458		1272		120
958	-15	191	9.0	G0	01 00.617	0.11	2	72.185	-14 46 30.08	0.41	2	72.185				3546
959	-32	412	7.56	K0	01 01.615	0.17	4	71.082	-32 20 46.09	0.17	4	71.082		1273		3547
960	+ 4	166	7.72	A5	01 05.359	0.06	2	71.783	+ 4 58 02.86	0.29	2	71.783		1276		3548
961	+ 0	174	6.18	F0	01 14.648	0.03	40	71.864	+ 1 05 56.55	0.06	40	71.864	37	1281	209	30037
962	-54	242	9.2	K5	1 01 15.677	0.21	3	69.387	-54 25 49.94	0.10	3	69.387				3549
963	-78	28	7.34	G5	01 24.519	0.10	7	70.718	-77 49 08.39	0.16	7	70.718	2067	1287		32067
963 SP					01 24.545	0.13	6	68.664	-77 49 08.36	0.21	6	68.664	2067	1287		52067
964	-19	168	9.0	A0	01 33.876	0.33	2	72.119	-18 50 00.91	0.13	2	72.119				3550
965	- 0	163	8.8	K5	01 43.615	0.08	2	71.728	+ 0 20 51.69	0.04	2	71.728				3551
966	- 6	200	8.5	G0	1 01 52.286	0.04	2	71.322	- 5 34 15.61	0.32	2	71.322		1294		3552
967	-38	362	8.9	G5	01 59.208	0.06	4	70.564	-37 39 35.17	0.22	4	70.564				3553
968	- 8	186	8.8	F8	02 06.870	0.19	2	71.238	- 7 56 34.48	0.16	2	71.238		1295		3554
969	+ 1	203	7.0	K0	02 09.139	0.18	2	71.679	+ 2 02 46.17	0.11	2	71.679				3555
970	-23	390	8.4	K0	02 12.787	0.13	3	69.379	-22 46 18.90	0.16	3	69.379				3556
971	-18	175	8.8	F5	1 02 21.070	0.04	2	71.774	-17 44 29.54	0.08	2	71.774				3557
972	-21	165	7.5	F5	02 22.715	0.07	4	70.146	-21 00 00.80	0.28	4	70.146				3558
973	-24	474	8.5	K0	02 24.016	0.01	4	69.917	-24 07 33.43	0.08	4	69.917				3559
974	+14	163	5.65	F2	02 26.738	0.04	33	70.814	+14 40 40.83	0.07	31	70.807	1028	1302	213	31028
975	-74	83	8.7	K0	02 26.767	0.36	4	69.915	-73 43 49.29	0.14	4	69.915				18543
976	-59	70	8.1	G8	1 02 27.802	0.13	4	69.755	-58 42 31.00	0.13	4	69.755				3560
977	-14	203	7.51	K0	02 34.653	0.64	2	71.217	-14 01 36.51	0.05	2	71.217		1303		3561
978	-57	228	9.4	K0	02 34.934	0.07	4	70.556	-57 25 12.34	0.11	4	70.556				3562
979	-56	214	9.3	K2	02 35.890	0.11	4	70.483	-55 43 19.00	0.19	4	70.483				3563
980	-65	112	7.6	K0	02 39.261	0.13	4	70.529	-64 58 08.87	0.17	4	70.529				18544
981	-15	194	9.0	G5	1 02 41.572	0.22	2	71.259	-15 10 23.75	0.05	2	71.259				3564
982	-72	79	8.58	K0	02 44.772	0.09	4	70.054	-72 31 13.80	0.09	4	70.054		1306		18545
983	-20	191	8.7	A2	02 46.093	0.06	4	70.258	-20 07 21.08	0.07	4	70.258				3565
984	-71	36	8.8	M1	02 49.542	0.16	4	69.609	-70 48 29.26	0.19	4	69.609				18546
985	- 4	140	8.5	G5	02 51.255	0.29	2	71.754	- 3 39 01.92	0.15	2	71.754				3566
986	+20	154	9.1	K0	1 02 51.589	0.18	4	68.989	+20 51 12.78	0.28	4	68.989				25175
987	-28	336	7.9	K0	03 02.288	0.14	4	69.993	-28 35 16.35	0.26	4	69.993				3567
988	+ 0	180	8.9	G5	03 04.128	0.19	2	71.299	+ 0 56 00.78	0.25	2	71.299				3568
989	-83	21	8.19	K0	03 15.406	0.15	4	70.896	-83 31 21.14	0.13	4	70.896		1318		18547
989 SP					03 15.380	0.10	4	69.735	-83 31 20.81	0.21	4	69.735		1318		18547
990	-26	356	8.2	G0	1 03 24.555	0.17	4	70.051	-26 34 26.42	0.22	4	70.051				3569
991	-13	197	8.5	K0	03 25.421	0.09	2	71.813	-13 18 21.42	0.28	2	71.813				3570
992	- 9	218	7.8	K0	03 27.021	0.04	2	71.813	- 8 55 36.62	0.06	2	71.813				3571
993	+ 2	155	7.8	K0	03 30.904	0.07	2	72.137	+ 3 00 27.48	0.35	2	72.137				3572
994	-11	207	6.90	G5	03 36.216	0.28	2	72.143	-11 15 08.74	0.10	2	72.143		1326		3573
995	-62	86	8.93	G0	1 03 41.578	0.07	4	70.745	-62 24 15.78	0.08	4	70.745		1328		3574
996	-24	484	6.29	G5	03 42.387	0.03	57	71.213	-24 15 34.12	0.04	57	71.213	1029		216	81029
997	-19	178	8.9	A3	03 43.327	0.03	2	71.840	-19 06 20.35	0.47	2	71.840				3575
998	-40	244	8.9	G5	03 43.360	0.13	4	70.014	-39 40 53.21	0.11	4	70.014				3576
999	-49	304	9.4	F8	03 45.373	0.18	3	70.335	-49 12 30.51	0.08	3	70.335				121
1000	-42	378	7.5	K2	1 03 46.139	0.14	4	70.432	-42 06 14.00	0.13	4	70.432				122
1001	-66	83	9.6	K5	03 47.071	0.45	2	70.708	-66 19 35.20	0.34	2	70.708				18548
1002	-71	37	7.94	K0	03 47.552	0.27	4	70.222	-71 12 02.99	0.24	4	70.222		1331		18549
1003	-38	377	8.1	K0	03 50.617	0.23	5	70.715	-38 30 01.46	0.14	5	70.715				3577
1004	+12	135	6.22	G5	03 55.569	0.12	6	70.288	+12 41 19.30	0.11	6	70.288	2068	1336	219	32068
1005	-10	232	7.42	A2	1 03 56.491	0.18	2	71.675	-10 02 02.33	0.24	2	71.675		1337		3578
1006	-35	374	7.81	F8	03 56.820	0.05	4	71.144	-35 03 53.95	0.20	4	71.144		1338		3579
1007	-33	402	9.4	K0	04 04.652	0.23	2	70.803	-32 53 35.02	0.05	2	70.803				3580
1008	-37	404	8.6	G0	04 07.377	0.13	4	71.196	-37 12 09.65	0.19	4	71.196				3581
1009	-40	247	6.76	K0	04 09.636	0.03	4	70.745	-40 07 25.40	0.10	4	70.745		1342		123
1010	-31	443	9.6	K0	1 04 14.134	0.31	2	69.850	-31 32 45.26	0.15	2	69.850				3582
1011	- 1	146	8.9	K0	04 14.140	0.23	2	71.809	- 1 12 17.13	0.15	2	71.809				3583
1012	-46	307	8.6	K0	04 21.354	0.27	3	71.145	-46 11 07.61	0.32	2	70.279				124
1013	-61	70	8.20	K0	04 26.973	0.06	4	70.819	-61 25 14.57	0.17	4	70.819		1349		3586
1014	-48	273	9.4	K2	04 33.646	0.06	2	70.253	-48 20 42.57	0.08	2	70.253				125

983 10.7m, 2.5, 310°.

CATA'LOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
1015	-30	348	9.3	A2	1 04 38.060	0.13	2	69.744	-29 52 55.82	0.14	2	69.744				3588
1016	-89	11	9.7	G5	04 38.372	0.11	4	70.593	-89 26 23.58	0.20	4	70.593				18550
1016	SP				04 33.726	0.41	4	69.748	-89 26 21.85	0.77	4	69.748				18550
1017	-25	438	7.58	K0	04 46.281	0.03	2	69.818	-25 07 19.51	0.14	2	69.818				3591
1018	-24	496	6.26	A2	04 47.511	0.09	4	70.602	-24 15 46.91	0.11	4	70.602		1356		3592
1019	-64	113	8.45	K0	1 05 03.245	0.33	3	70.646	-63 37 19.16	0.10	3	70.646		1363		3594
1020	-79	27	8.9	K5	05 11.225	0.32	3	70.761	-79 30 11.80	0.20	3	70.761				18551
1020	SP				05 11.252	0.18	5	70.597	-79 30 12.00	0.41	4	70.630				18551
1021	-62	89	5.32	K0	05 20.313	0.06	26	70.420	-62 02 31.58	0.05	24	70.378	39	1372	225	30039
1022	+ 1	212	6.69	G5	05 25.007	--	1	71.740	+ 1 43 46.93	--	1	71.740		1374		3598
1023	-84	20	7.40	K0	1 05 25.662	0.04	164	71.022	-83 51 27.92	0.06	163	71.023	3973	1375		63973
1023	SP				05 25.685	0.09	169	70.934	-83 51 27.79	0.11	162	70.944	3973	1375		73973
1024	-69	34	9.4	M0	05 28.787	0.09	3	70.708	-68 49 57.81	0.46	3	70.708				18553
1025	-42	391	5.15	A3	05 31.008	0.08	22	70.580	-41 45 13.67	0.07	21	70.567	1031	1378	226	31031
1026	-22	203	8.9	K2	05 38.430	0.05	4	69.921	-21 52 58.07	0.17	4	69.921				3599
1027	-41	281	9.3	K2	1 05 41.536	0.09	2	70.149	-40 50 20.97	0.28	2	70.149				126
1028	- 3	154	8.8	K2	05 41.753	--	1	71.656	- 3 16 29.35	--	1	71.656				3600
1029	-56	227	8.3	G0	05 43.381	0.17	4	70.455	-56 14 10.36	0.13	4	70.455				3601
1030	-59	74	8.7	K0	05 45.859	0.08	4	70.497	-59 19 28.77	0.21	4	70.497				3602
1031	-45	371	9.4	G0	05 47.031	0.16	3	70.667	-45 04 29.10	0.33	3	70.667				127
1032	+ 4	190	5.67	F0	1 05 47.106	0.08	6	69.494	+ 5 23 05.06	0.16	6	69.494	2073	1383	228	32073
1033	-38	391	9.0	G5	05 53.207	0.15	4	70.492	-38 32 46.91	0.05	4	70.492				3603
1034	- 6	212	7.6	F0	05 55.252	0.09	2	71.343	- 6 26 29.55	0.12	2	71.343				3604
1035	-53	257	9.1	G5	05 55.526	0.14	3	71.720	-52 58 51.49	0.05	3	71.720				3605
1036	-15	206	8.9	K0	05 56.383	0.12	2	72.209	-15 26 40.66	0.02	2	72.209				3606
1037	- 2	167	8.0	F2	1 05 59.043	0.13	2	72.070	- 2 19 35.14	0.15	2	72.070				3607
1038	-33	415	9.0	G5	06 02.670	0.15	3	70.376	-32 41 31.87	0.11	3	70.376				3608
1039	-10	240	3.60	K0	06 04.743	0.04	30	71.957	-10 26 51.67	0.07	30	71.957	40	1384	229	30040
1040	-17	198	8.6	M1	06 11.136	0.21	3	72.164	-17 19 47.83	0.04	3	72.164				3609
1041	-77	43	8.20	G5	06 13.319	0.21	4	70.298	-76 56 25.93	0.12	4	70.298		1386		18554
1041	SP				1 06 13.249	0.18	4	70.167	-76 56 25.84	0.20	4	70.167		1386		18554
1042	-82	16	7.79	K0	06 29.114	0.12	4	70.965	-81 54 55.81	0.24	4	70.965		1391		18555
1042	SP				06 28.868	0.06	4	70.330	-81 54 55.47	0.23	4	70.330		1391		18555
1043	-10	243	8.9	K0	06 32.262	0.30	2	71.234	-10 22 00.38	0.32	2	71.234				3610
1044	+ 2	161	9.2	M2	06 37.562	0.23	2	72.031	+ 2 30 27.44	0.10	2	72.031				3611
1045	-43	335	8.3	G5	1 06 44.906	0.17	4	71.064	-42 54 37.13	0.25	3	71.106				128
1046	-34	444	8.9	G0	06 44.909	0.11	4	70.693	-33 52 28.72	0.15	4	70.693				3612
1047	-61	74	8.8	K0	06 47.210	0.17	4	70.270	-60 53 11.43	0.06	4	70.270				3613
1048	-36	437	9.1	G0	06 49.019	0.13	4	70.623	-36 24 32.97	0.20	4	70.623				3614
1049	-56	230	9.7	K0	06 57.001	0.18	4	70.048	-55 51 26.89	0.49	4	70.048				3615
1050	-51	289	9.1	K2	1 06 57.794	0.11	4	70.287	-51 06 08.62	0.17	4	70.287				129
1051	-47	334	8.7	K2	06 59.775	0.11	4	70.705	-47 23 49.47	0.11	4	70.705				130
1052	-20	209	8.7	G5	07 05.320	0.16	2	71.214	-19 39 28.05	0.01	2	71.214				3616
1053	-70	49	8.5	K2	07 14.784	0.20	4	69.212	-69 49 57.51	0.34	3	69.664				18556
1054	-67	74	8.03	K0	07 17.784	0.16	4	69.738	-67 08 47.86	0.26	4	69.738		1408		18557
1055	-29	353	8.4	G0	1 07 27.399	0.18	3	69.441	-29 02 12.45	0.24	3	69.441				3617
1056	- 8	205	9.0	K2	07 31.154	0.04	2	70.787	- 7 30 11.41	0.10	2	70.787				3618
1057	- 2	174	8.9	F8	07 32.805	0.39	2	71.238	- 1 51 50.85	0.21	2	71.238		1412		3619
1058	- 8	207	8.7	G0	07 38.344	0.21	2	71.242	- 7 59 27.52	0.10	2	71.242				3620
1059	-26	377	7.39	K0	07 39.384	0.04	6	68.918	-26 27 34.61	0.08	6	68.918	2076	1417	234	3621
1060	- 9	227	6.58	G5	1 07 41.373	0.07	2	71.284	- 9 10 18.63	0.20	2	71.284		1418	235	3622
1061	-57	252	9.0	G0	07 45.033	0.09	4	69.291	-56 37 19.90	0.09	4	69.291				3623
1062	-37	434	8.1	G5	07 48.359	0.16	4	70.293	-36 48 37.64	0.12	4	70.293				3624
1063	-44	328	9.5	K0	07 53.573	0.09	3	70.496	-44 20 33.85	0.22	3	70.496				131
1064	-35	407	9.4	A3	07 55.341	0.09	3	70.501	-34 46 08.09	0.07	3	70.501				3625
1065	-17	204	7.4	G5	1 07 55.438	0.27	2	71.259	-16 34 21.26	0.44	2	71.259				3626
1066	-35	408	9.1	G0	07 57.882	0.13	4	70.209	-35 18 34.34	0.05	4	70.209				3627
1067	-58	81	6.47	G5	08 05.167	0.06	6	69.021	-57 57 33.70	0.09	6	69.021	2077	1425		32077
1068	+ 3	165	8.7	A3	08 06.176	0.12	2	71.285	+ 4 15 15.42	0.23	2	71.285				3628
1069	-28	359	8.5	F0	08 09.498	0.10	3	69.360	-28 02 40.09	0.08	3	69.360				3629
1070	-12	216	8.5	K0	1 08 16.264	0.20	2	71.195	-12 17 36.09	0.22	2	71.195				3630
1071	-50	322	8.1	K0	08 22.208	0.14	4	70.981	-49 58 47.43	0.18	4	70.981				132
1072	-53	272	8.9	K0	08 22.558	0.07	5	70.193	-53 05 06.11	0.07	5	70.193				3631
1073	-19	195	7.49	K2	08 34.664	0.32	2	71.227	-19 04 13.25	0.05	2	71.227		1436		3632
1074	+20	172	4.89	K0	08 45.698	0.03	70	71.121	+20 46 09.36	0.05	69	71.110	1032	1437	243	81032
1075	-32	469	7.98	G0	1 08 48.372	0.05	4	71.010	-32 30 48.09	0.12	4	71.010		1438		3633
1076	-14	225	7.67	M3	08 48.396	0.02	2	71.303	-13 46 07.98	0.34	2	71.303		1439		3634
1077	+ 9	138	6.65	G5	08 51.577	0.04	6	69.217	+10 01 35.55	0.10	6	69.217	2079	1440		32079
1078	+ 3	166	8.5	F0	08 52.625	0.04	2	71.313	+ 4 09 50.62	0.06	2	71.313				3635
1079	+29	190	4.70	K0	08 54.084	0.06	42	71.396	+29 49 28.37	0.09	40	71.420	43	1441	244	30043
1080	-48	293	9.1	G5	1 08 56.208	0.09	4	70.313	-47 49 39.83	0.04	3	70.104				133
1081	-77	45	8.46	F2	09 02.422	0.08	4	69.406	-77 28 20.49	0.09	4	69.406		1443		18558
1081	SP				09 02.468	0.09	4	68.732	-77 28 19.96	0.15	4	68.732		1443		18558
1082	- 6	226	8.5	A3	09 03.104	0.07	2	70.690	- 5 36 19.85	0.26	2	70.690				3636
1083	-23	432	8.3	K2	09 03.958	0.09	4	69.219	-22 59 39.57	0.13	4	69.219				3637

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
1084	-31	480	9.1	K2	1 09 12.256	0.15	3	69.359	-30 49 56.30	0.12	3	69.359				3638
1085	-44	336	9.4	G0	09 14.033	0.12	4	70.244	-43 59 35.09	0.11	4	70.244				134
1086	-20	215	8.9	K0	09 15.899	0.06	2	71.214	-19 55 32.56	0.10	2	71.214				3639
1087	-1	156	8.1	G5	09 17.596	0.02	2	71.269	-0 42 38.39	0.33	2	71.269				3640
1088	-59	83	8.4	G5	09 18.925	0.12	4	68.845	-59 27 56.29	0.19	4	68.845				3641
1089	-15	217	9.0	G0	1 09 25.882	0.13	2	71.766	-14 49 11.27	0.07	2	71.766				3642
1090	-18	194	8.5	K0	09 31.670	0.24	2	71.294	-18 04 45.29	0.02	2	71.294				3643
1091	-46	328	8.9	G5	09 33.133	0.22	4	70.768	-46 10 33.05	0.14	4	70.768				135
1092	-16	196	8.7	K5	09 34.528	0.04	2	71.309	-15 57 21.73	0.07	2	71.309				3644
1093	-39	316	8.1	G5	09 42.739	0.06	3	71.085	-39 25 35.98	0.15	3	71.085				3645
1094	-51	304	9.3	K0	1 09 43.723	0.13	4	68.952	-50 51 19.08	0.15	4	68.952				136
1095	-11	224	7.9	K0	09 46.039	0.04	2	71.785	-11 12 19.42	0.24	2	71.785				3646
1096	-45	398	9.1	G0	09 55.266	0.11	4	70.797	-44 45 44.11	0.09	4	70.797				137
1097	+1	223	6.82	F8	09 56.392	0.01	2	71.298	+2 12 26.39	0.05	2	71.298		1454		3647
1098	-9	237	8.0	G0	09 58.902	0.10	2	71.791	-9 29 19.41	0.25	2	71.791				3648
1099	-54	277	8.7	G5	1 10 03.806	0.24	4	68.976	-54 21 36.99	0.09	4	68.976				3649
1100	-25	480	8.8	K5	10 21.810	0.04	4	69.227	-25 30 02.55	0.09	4	69.227				3650
1101	+0	198	8.6	F5	10 27.424	-	1	71.656	+0 48 50.72	-	1	71.656				3651
1102	-35	420	6.96	K0	10 27.480	0.09	6	70.287	-35 28 13.66	0.10	6	70.287	2080	1466	249	18442
1103	-38	420	5.91	A5	10 27.490	0.04	38	71.138	-38 07 16.35	0.05	37	71.100	44	1465	248	30044
1104	-49	342	9.3	K0	1 10 43.036	0.18	4	71.255	-49 06 29.19	0.10	4	71.255				138
1105	-27	393	8.5	K2	10 47.170	0.10	4	68.799	-26 42 26.11	0.14	4	68.799				3652
1106	-74	88	7.46	F8	10 47.795	0.17	4	69.508	-74 10 20.75	0.15	4	69.508	2081	1471		32081
1106 SP					10 47.860	0.07	45	71.565	-74 10 20.65	0.13	44	71.544	2081	1471		52081
1107	-4	157	8.5	G5	10 59.406	0.15	2	71.217	-3 34 44.15	0.16	2	71.217				3653
1108	-32	479	8.2	K0	1 11 01.582	0.02	4	70.703	-32 10 19.83	0.11	4	70.703				3654
1109	+23	158	4.64	K0	11 01.713	0.09	7	71.251	+24 19 09.15	0.16	6	71.305	2082	1474		32082
1110	-33	448	9.1	G5	11 03.813	0.08	5	70.934	-33 05 07.24	0.15	5	70.934				3655
1111	+6	174	5.57	A5	11 07.154	0.04	68	71.934	+7 18 40.27	0.04	68	71.934	1033	1476	252	31033
1112	-80	17	8.3	A5	11 11.048	0.21	5	70.908	-80 22 39.35	0.33	5	70.908				18559
1112 SP					1 11 11.027	0.13	4	69.820	-80 22 38.93	0.18	4	69.820				18559
1113	+4	212	7.98	F8	11 15.927	0.28	2	70.844	+4 52 38.60	0.31	2	70.844			253	3656
1114	-64	119	9.1	G5	11 23.048	0.07	3	68.825	-64 01 30.94	0.07	3	68.825				18560
1115	-31	497	7.7	G5	11 23.219	0.14	3	69.739	-31 22 51.17	0.14	3	69.739				3657
1116	-8	214	7.8	G5	11 24.643	0.18	2	71.309	-7 53 12.93	0.01	2	71.309		1481		3658
1117	-42	428	9.2	K0	1 11 26.491	0.15	4	70.844	-42 29 15.87	0.16	4	70.844				139
1118	+15	177	5.85	B8	11 27.949	0.07	6	69.678	+15 52 09.26	0.18	6	69.678	2083	1482		32083
1119	-2	184	8.3	F5	11 31.770	0.16	2	71.758	-2 22 43.84	0.68	2	71.758				3659
1120	-36	470	8.3	G5	11 34.926	0.05	4	71.320	-36 26 58.70	0.26	4	71.320				3660
1121	+0	204	8.8	K0	11 36.201	0.25	2	71.776	+1 14 00.26	0.11	2	71.776				3661
1122	-10	259	8.9	K0	1 11 38.179	0.01	2	71.813	-10 04 01.00	0.14	2	71.813				3662
1123	-16	201	8.8	K2	11 44.165	0.04	2	71.810	-16 23 39.75	0.12	2	71.810				3663
1124	-43	359	8.8	G5	11 49.023	0.03	4	70.756	-42 48 09.98	0.05	4	70.756				140
1125	-75	77	9.1	K0	11 58.270	0.08	5	69.929	-75 22 07.63	0.08	5	69.929				18561
1125 SP					11 58.265	0.14	4	70.512	-75 22 07.61	0.05	4	70.512				18561
1126	-15	232	8.7	K0	1 12 02.972	0.11	2	71.718	-14 32 15.99	0.21	2	71.718				3664
1127	-37	467	8.12	F8	12 05.393	0.07	4	70.318	-37 16 18.64	0.08	4	70.318		1495		3665
1128	+3	174	8.9	F8	12 06.140	0.04	2	71.796	+3 31 19.88	0.09	2	71.796				3666
1129	+3	175	8.3	F5	12 09.370	0.12	2	71.299	+4 19 57.54	0.11	2	71.299				3667
1130	-51	313	7.19	K0	12 12.504	0.06	4	69.221	-50 40 50.33	0.24	4	69.221		1500		141
1131	-1	162	5.82	F5	1 12 15.849	0.09	6	69.057	-1 14 22.91	0.17	6	69.057	2084	1501	256	32084
1132	-53	285	6.97	K0	12 16.161	0.06	4	70.053	-53 23 18.97	0.12	4	70.053		1502		3668
1133	-41	313	9.0	K0	12 16.788	0.13	4	70.281	-40 48 48.78	0.15	4	70.281				142
1134	-23	458	8.2	K2	12 17.980	0.12	4	69.030	-22 47 27.14	0.12	4	69.030				3669
1135	-30	396	8.4	G0	12 25.221	0.20	3	69.702	-29 39 17.90	0.32	3	69.702				3670
1136	-4	166	8.9	G0	1 12 28.309	0.16	2	71.242	-4 02 42.15	0.02	2	71.242				3671
1137	-18	200	8.0	G5	12 34.390	0.01	2	71.199	-18 26 35.32	0.29	2	71.199				3672
1138	-39	335	9.2	G5	12 34.867	0.16	4	69.943	-39 06 21.18	0.16	4	69.943				3673
1139	-65	124	9.2	G5	12 40.498	0.12	4	69.301	-65 09 37.43	0.19	4	69.301				18562
1140	-58	87	7.37	K0	12 40.751	0.12	4	70.034	-57 38 53.32	0.19	4	70.034		1507		3674
1141	-15	233	8.6	K2	1 12 42.050	0.01	2	71.265	-15 24 50.99	0.20	2	71.265				3675
1142	-28	383	8.7	K0	12 56.423	0.12	4	69.700	-28 31 09.23	0.15	4	69.700				3676
1143	-22	221	8.0	K0	12 56.569	0.16	4	69.273	-21 59 35.24	0.04	4	69.273				3677
1144	-75	78	9.1	K5	12 57.266	0.08	4	69.554	-74 53 37.47	0.19	4	69.554				18563
1145	-56	256	7.63	K5	12 57.795	0.18	4	69.806	-55 53 48.03	0.04	4	69.806		1512		3678
1146	+0	210	6.70	A2	1 13 01.531	0.15	2	70.747	+0 38 54.42	0.07	2	70.747		1513		3679
1147	-24	546	8.09	G5	13 03.021	0.15	4	69.510	-24 12 59.31	0.09	4	69.510		1514		3680
1148f	-60	96	8.52	A2	13 03.963	0.09	4	69.735	-60 22 46.14	0.16	4	69.735		1515		3681
1149	-54	287	9.3	G5	13 05.914	0.19	4	70.003	-54 21 38.28	0.12	4	70.003				3682
1150	-58	90	8.6	M0	13 16.207	0.21	4	70.271	-58 17 42.14	0.19	4	70.271				3683
1151	-10	263	8.3	A0	1 13 16.928	0.27	2	70.805	-10 03 03.76	0.40	2	70.805				3684
1152	-62	99	7.8	K0	13 29.120	0.04	3	69.164	-62 22 22.71	0.31	3	69.164				3685
1153	-63	107	8.03	K2	13 32.238	0.13	4	69.578	-63 24 41.87	0.19	4	69.578		1522		3686
1154	-5	221	8.8	K0	13 36.627	0.06	2	71.243	-5 12 52.17	0.03	2	71.243		1524		3687
1155	-20	227	8.8	F5	13 39.152	0.08	2	70.835	-20 04 03.61	0.05	2	70.835				3688

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
1156	-22	223	8.6	K0	13 45.767	0.13	4	69.263	-21 44 47.43	0.11	4	69.263				3689
1157	-34	483	7.93	A3	13 47.631	0.10	4	70.413	-34 24 45.04	0.14	4	70.413		1528		3690
1158	-12	233	7.46	G5	13 54.834	0.17	3	71.073	-12 21 37.95	0.11	3	71.073		1531		3691
1159	-47	371	9.3	K0	13 56.704	0.17	3	70.830	-47 05 58.00	0.20	3	70.830				143
1160	-33	467	9.0	F8	14 01.001	0.06	4	70.253	-32 58 48.50	0.13	4	70.253				3692
1161	+ 1	238	7.6	F0	14 01.123	0.17	2	71.723	+ 2 28 17.38	0.05	2	71.723				3693
1162	-17	226	8.9	K0	14 02.891	0.28	2	71.753	-16 53 09.90	0.14	2	71.753				3694
1163	+ 4	216	8.2	K0	14 08.858	0.23	2	71.720	+ 4 47 32.59	0.07	2	71.720				3695
1164	-26	417	8.1	K0	14 15.957	0.13	4	69.245	-25 56 15.24	0.15	4	69.245				3696
1165	-38	445	7.8	K0	14 23.277	0.12	4	70.236	-38 22 59.84	0.10	4	70.236				3697
1166	- 3	174	6.83	F8	14 25.662	0.22	2	71.238	- 2 32 28.89	0.02	2	71.238		1542		3698
1167	-32	499	8.7	K0	14 26.517	0.09	4	69.494	-31 40 17.06	0.17	4	69.494				3699
1168	-41	319	7.48	K0	14 27.287	0.06	4	70.292	-41 26 38.31	0.20	4	70.292		1543		144
1169	-42	450	8.9	K2	14 31.837	0.08	4	70.041	-42 08 06.24	0.04	4	70.041				145
1170	- 0	196	9.0	F5	14 32.850	0.08	2	71.285	+ 0 02 06.79	0.03	2	71.285				3700
1171	-68	47	6.91	F2	14 47.061	0.15	6	68.976	-67 41 41.21	0.09	6	68.976	2086	1551		32086
1172	- 6	244	8.1	F8	14 50.930	0.05	2	71.292	- 5 53 43.94	0.03	2	71.292		1554		3701
1173	-79	34	8.9	G0	14 51.882	0.07	4	69.001	-78 38 43.32	0.11	4	69.001				18564
1173 SP					14 51.798	0.19	4	70.175	-78 38 43.55	0.25	4	70.175				18564
1174	-35	441	8.1	F8	14 59.321	0.08	4	70.177	-34 55 36.75	0.14	4	70.177				3702
1175	-37	488	7.85	K0	15 04.854	0.04	4	70.463	-37 31 59.30	0.04	4	70.463		1560		3703
1176	+ 0	215	7.9	A5	15 08.421	0.26	2	71.228	+ 0 53 19.11	0.01	2	71.228				3704
1177	-66	92	8.1	K5	15 09.726	0.22	4	68.565	-66 13 50.22	0.08	4	68.565				18565
1178	+ 2	185	5.28	A2	15 12.958	0.03	91	71.392	+ 3 21 05.87	0.03	91	71.392	1034	1566	267	31034
1179	-27	424	8.7	G0	15 14.368	0.05	4	68.817	-27 16 32.39	0.14	4	68.817				3705
1180	-40	294	8.8	K0	15 14.413	0.08	4	70.292	-40 09 47.23	0.12	4	70.292				146
1181	-46	357	8.2	G5	15 32.928	0.16	4	70.492	-46 26 07.27	0.11	4	70.492				147
1182	-61	88	9.4	M0	15 33.896	0.06	4	68.760	-61 11 24.83	0.13	4	68.760				3706
1183	-51	325	8.23	A2	15 34.873	0.25	4	68.828	-51 17 51.54	0.04	4	68.828		1570		148
1184	-52	160	8.4	K0	15 37.459	0.18	4	68.782	-52 36 06.22	0.19	4	68.782				3707
1185	-12	238	8.7	K5	15 47.639	0.03	2	71.205	-11 47 24.54	0.20	2	71.205				3708
1186	-50	350	9.5	G5	15 50.216	0.08	3	71.040	-49 36 14.93	0.19	3	71.040				149
1187	-20	234	8.0	K0	16 03.230	0.01	2	69.117	-20 27 11.42	0.13	2	69.117				3709
1188	- 1	167	8.1	K0	16 06.931	0.14	2	71.731	- 1 07 41.83	0.02	2	71.731		1582		3710
1189	-20	235	8.1	G5	16 08.476	0.03	2	71.269	-19 37 40.36	0.14	2	71.269				3711
1190	-44	367	8.3	F2	16 10.502	0.14	4	70.047	-44 27 35.13	0.16	4	70.047				150
1191	-30	422	9.0	K0	16 12.385	0.04	3	69.762	-30 26 45.97	0.04	3	69.762				3712
1192	-14	252	7.7	G5	16 14.225	0.17	2	71.723	-13 39 35.12	0.02	2	71.723				3713
1193	-36	501	8.7	F0	16 15.445	0.14	4	70.342	-36 31 18.34	0.15	4	70.342				3714
1194	+ 3	184	8.5	A2	16 16.886	0.01	2	71.806	+ 4 23 28.45	0.39	2	71.806		1584		3715
1195	-33	484	9.1	K5	16 19.555	0.12	4	71.034	-33 27 06.12	0.16	4	71.034				3716
1196	- 7	209	9.2	K0	16 23.159	0.08	2	71.826	- 6 33 24.30	0.15	2	71.826				3717
1197	- 8	227	8.3	G5	16 25.671	0.14	2	71.291	- 7 58 03.36	0.02	2	71.291				3718
1198	- 9	256	9.0	G0	16 30.245	0.12	2	71.279	- 9 11 54.27	0.16	2	71.279		1586		3719
1199	-82	22	8.09	K0	16 38.706	0.07	4	68.937	-81 48 14.29	0.12	4	68.937		1588		18566
1199 SP					16 38.623	0.15	4	69.772	-81 48 14.62	0.34	4	69.772		1588		18566
1200	-10	279	8.7	G5	16 39.233	0.18	2	71.755	- 9 38 29.11	0.06	2	71.755				3720
1201	-74	92	8.8	K0	16 42.100	0.17	4	69.222	-74 24 58.66	0.09	4	69.222				18567
1202	+26	220	4.67	A2	16 42.753	0.10	13	71.097	+27 00 06.22	0.13	13	71.097	45	1591	269	30045
1203	-45	433	8.9	G5	16 43.162	0.06	4	70.032	-45 11 57.99	0.06	4	70.032				151
1204	+ 2	190	8.1	K0	16 49.032	0.15	2	71.768	+ 3 01 39.13	0.08	2	71.768		1593		3721
1205			8.9	K	16 58.193	0.13	2	71.766	- 0 51 04.99	0.47	2	71.766				3722
1206	-23	483	8.4	A5	16 58.378	0.08	4	68.802	-23 22 12.30	0.12	4	68.802				3723
1207	-48	337	8.9	K2	16 59.507	0.22	5	70.861	-48 25 06.75	0.16	5	70.861				152
1208*	-35	452	7.8	F0	17 00.174	0.20	4	70.299	-34 45 11.91	0.17	4	70.299				3724
1209	-40	307	10.1	K0	17 01.261	0.16	4	71.078	-40 15 50.71	0.17	4	71.078				153
1210	-25	524	7.71	G5	17 05.835	0.09	4	68.950	-25 12 44.89	0.01	4	68.950				3725
1211	-54	305	7.21	K0	17 17.017	0.07	4	69.221	-53 53 56.50	0.17	4	69.221		1601	271	3726
1212	-29	418	8.5	G5	17 19.894	0.03	3	69.336	-29 07 26.70	0.20	3	69.336				3727
1213	-39	372	8.6	G5	17 21.191	0.08	4	70.157	-39 27 07.74	0.10	4	70.157				3728
1214	-15	247	8.1	F0	17 22.156	0.14	2	71.199	-15 10 33.72	0.34	2	71.199				3729
1215	-17	232	8.2	K0	17 22.939	0.01	2	71.244	-17 18 00.56	0.02	2	71.244				3730
1216	-47	389	7.3	M1	17 24.603	0.11	4	70.460	-47 33 16.08	0.16	4	70.460				154
1217	-43	391	9.1	F8	17 27.504	0.08	4	70.240	-42 49 44.19	0.27	4	70.240				155
1218	- 1	173	8.9	K2	17 27.986	0.04	2	70.716	- 1 05 07.26	0.52	2	70.716				3731
1219	-10	286	6.64	F2	17 33.163	0.21	2	70.815	-10 08 43.01	0.47	2	70.815		1608		3732
1220	- 3	181	8.1	G0	17 35.371	0.11	2	71.284	- 2 45 10.39	0.24	2	71.284				3733
1221	-57	288	9.2	G5	17 40.494	0.16	4	68.959	-56 52 42.79	0.16	4	68.959				3734
1222	+ 1	248	8.7	K2	17 45.162	0.17	2	71.255	+ 2 13 32.65	0.13	2	71.255				3735
1223	-67	86	9.2	G0	17 47.441	0.10	4	69.015	-67 03 37.49	0.22	4	69.015				18568
1224	-11	248	6.30	K0	17 58.699	0.09	6	69.022	-11 30 00.97	0.08	6	69.022	2088	1618		32088
1225	-58	95	7.60	F5	17 59.753	0.14	4	69.040	-57 36 41.73	0.12	4	69.040		1620		3736
1226	-14	258	7.01	G5	18 12.484	0.23	2	71.236	-14 09 07.13	0.23	2	71.236		1626		3737
1227	-72	92	8.8	G0	18 18.391	0.14	4	69.268	-72 03 53.98	0.43	4	69.268				18569
1228	+27	215	5.60	K0	18 21.118	0.12	6	69.245	+28 28 37.81	0.15	6	69.245	2089	1630	274	32089

1208 8.6m-8.8m, 1°0, 283°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
1229	-50	363	8.07	K0	18 27.343	0.08	4	70.406	-49 49' 33.25	0.17	4	70.406		1631		156
1230	-39	379	8.1	G0	18 44.279	0.14	4	70.589	-38 47' 18.16	0.23	4	70.589				3738
1231	-6	256	6.95	G0	18 46.229	0.04	2	70.773	-6 25' 14.91	0.07	2	70.773		1635		3739
1232	-36	515	8.9	G5	18 48.639	0.06	4	69.992	-35 52' 10.87	0.04	4	69.992				3740
1233	-16	226	9.0	K2	18 49.999	0.19	2	71.212	-15 36' 30.55	0.42	2	71.212				3741
1234	-55	288	8.0	K0	19 02.990	0.19	4	69.060	-55 13' 11.71	0.15	4	69.060				3742
1235	-4	189	8.9	G0	19 09.492	0.10	3	70.753	-3 41' 53.99	0.10	3	70.753		1639		3743
1236	-50	368	6.88	F2	19 11.731	0.09	7	69.332	-50 00' 12.34	0.10	7	69.332	2090	1640	277	32090
1237	-63	111	8.9	K5	19 20.810	0.06	4	69.299	-63 14' 37.13	0.13	4	69.299				3744
1238*	-24	588	8.1	G0	19 23.074	0.15	4	69.016	-24 23' 23.00	0.06	4	69.016				3745
1239	-66	94	8.7	K5	19 32.713	0.16	4	69.596	-66 21' 57.93	0.16	4	69.596				18570
1240	-5	247	8.2	K5	19 35.469	0.03	2	70.803	-4 49' 31.80	0.23	2	70.803				3746
1241	-27	454	8.3	K5	19 40.754	0.06	3	69.023	-27 29' 42.44	0.15	3	69.023				3747
1242	-22	235	8.1	G5	19 41.232	0.09	4	69.948	-21 47' 42.84	0.16	4	69.948				3748
1243	-25	545	9.1	K0	19 46.562	0.06	4	70.288	-24 37' 38.11	0.26	4	70.288				3749
1244	-73	75	8.40	K0	19 58.090	0.21	4	69.570	-73 17' 42.40	0.19	4	69.570		1654		18571
1245	-11	255	8.4	A0	19 58.231	0.05	2	71.243	-10 52' 00.97	0.02	2	71.243				3750
1246	-32	536	8.2	K5	20 00.100	0.15	4	70.047	-31 40' 59.75	0.09	4	70.047				3751
1247	-19	228	8.1	K0	20 01.896	0.28	2	71.294	-19 04' 05.08	0.10	2	71.294				3752
1248	+0	223	6.48	K2	20 02.414	0.08	5	71.761	+1 27' 56.45	0.30	5	71.761	2091	1657		3753
1249	-52	172	8.9	G5	20 05.613	0.19	4	69.449	-52 29' 31.90	0.13	4	69.449				3754
1250	-32	538	9.5	G0	20 07.445	0.09	4	70.050	-32 33' 36.36	0.18	4	70.050				3755
1251	+3	190	6.96	G5	20 07.900	0.22	2	71.772	+4 28' 38.96	0.25	2	71.772		1660		3756
1252	-35	472	7.52	G5	20 10.351	0.14	4	70.029	-34 55' 32.81	0.13	4	70.029		1663		3757
1253	-47	402	8.9	F0	20 14.413	0.10	4	70.445	-47 33' 20.01	0.15	4	70.445				157
1254	-59	91	7.48	G0	20 14.852	0.12	6	69.706	-59 23' 14.50	0.09	6	69.706	2092	1665		3758
1255	-0	210	8.43	G0	20 16.495	0.25	2	71.311	+0 27' 10.47	0.48	2	71.311				3759
1256	-35	474	7.96	G5	20 20.248	0.16	4	70.308	-35 15' 08.18	0.06	4	70.308				3760
1257*	-70	64	6.96	F2	20 28.026	0.19	4	69.974	-69 58' 48.20	0.18	4	69.974				18572
1258	-61	94	7.35	M0	20 30.027	0.13	4	70.301	-61 35' 26.57	0.16	4	70.301				3761
1259	-17	248	7.74	G0	20 35.653	0.08	2	71.784	-16 49' 18.00	0.10	2	71.784				3762
1260	-18	222	7.16	M0	20 55.379	0.03	3	71.838	-18 11' 40.74	0.04	3	71.838	2094	1682		3763
1261	-34	535	9.1	--	20 59.272	0.12	5	71.340	-33 44' 36.60	0.19	5	71.340				3764
1262	-12	251	8.7	K0	21 00.776	--	1	71.940	-11 58' 18.22	--	1	71.940				3765
1263	-16	232	8.8	F5	21 06.109	--	1	71.833	-16 28' 58.92	--	1	71.833				3766
1264	+2	199	8.9	K5	21 06.370	--	1	71.943	+3 03' 15.48	--	1	71.943				3767
1265	-31	562	5.82	K5	21 11.389	0.03	85	70.841	-31 12' 21.33	0.03	84	70.840	1036	1687	284	31036
1266	-26	459	8.6	G5	21 20.144	0.19	3	70.646	-26 27' 08.43	0.20	3	70.646				3768
1267	-24	599	8.4	G5	21 24.131	0.17	3	69.938	-24 19' 09.70	0.16	3	69.938				3770
1268	-58	101	8.6	G0	21 24.225	0.14	4	70.034	-57 44' 27.81	0.06	4	70.034				3769
1269	-54	319	8.2	G5	21 30.775	0.18	4	70.557	-54 13' 41.51	0.31	4	70.557				3771
1270	-8	244	3.83	K0	21 31.256	0.03	73	70.882	-8 26' 31.31	0.03	73	70.882	47	1695	286	80047
1271	-10	299	8.3	F8	21 33.655	--	1	71.885	-10 04' 21.19	--	1	71.885				3772
1272	-38	488	8.8	K5	21 45.572	0.13	4	70.721	-37 51' 36.42	0.10	4	70.721				3773
1273	-68	53	8.6	G5	21 50.788	0.07	4	70.491	-68 14' 37.25	0.18	4	70.491				18573
1274	-20	262	8.5	K0	21 54.059	--	1	71.948	-19 47' 42.28	--	1	71.948				3774
1275	-50	382	9.5	A5	22 00.681	0.11	4	70.773	-49 46' 37.54	0.13	4	70.773				158
1276	-28	431	8.6	F8	22 01.392	0.10	3	70.032	-28 18' 35.44	0.03	3	70.032				3775
1277	-13	256	8.5	G5	22 01.688	--	1	72.659	-12 49' 49.02	--	1	72.659				3776
1278	-29	447	7.5	K0	22 03.691	0.12	4	70.698	-28 45' 29.94	0.14	4	70.698				3777
1279	-61	99	7.52	M0	22 05.402	0.09	4	70.486	-60 53' 21.71	0.12	4	70.486		1701		3778
1280	-39	398	8.7	F5	22 05.711	0.05	4	70.782	-39 10' 38.31	0.19	4	70.782				3779
1281	-1	182	7.9	A5	22 07.854	0.19	2	71.814	-1 13' 49.38	0.48	2	71.814				3780
1282*	-25	563	8.3	A2	22 09.666	0.13	4	70.043	-25 34' 48.03	0.10	4	70.043				3781
1283	-3	195	6.38	G5	22 16.138	0.08	10	71.094	-3 06' 30.62	0.06	10	71.094	1037	1704	287	31037
1284	-7	224	8.1	A3	22 17.958	0.26	2	71.866	-7 14' 44.50	0.00	2	71.866		1706		3782
1285	+2	204	7.7	A0	22 19.418	0.09	2	72.189	+3 05' 22.24	0.18	2	72.189				3783
1286	-43	420	9.3	K0	22 20.802	0.22	4	70.744	-42 41' 09.07	0.04	4	70.744				159
1287	-46	391	7.49	K0	22 24.666	0.26	4	70.530	-45 58' 53.53	0.17	4	70.530		1709		160
1288	-42	493	5.33	K0	22 28.162	0.23	5	71.946	-41 45' 08.90	0.24	5	71.946	2095	1711	289	32095
1289	-63	114	9.0	K0	22 28.285	0.10	4	70.842	-62 42' 25.50	0.22	4	70.842				3784
1290*	-6	270	6.78	A0	22 29.362	0.25	2	71.933	-6 12' 22.60	0.10	2	71.933		1712		3785
1291	-0	221	9.0	K0	22 29.687	0.16	2	72.200	+0 00' 33.66	0.23	2	72.200				3786
1292	-87	23	7.9	K5	22 37.589	0.04	3	69.402	-87 36' 08.39	0.15	3	69.402				18574
1292 SP					22 37.464	0.18	4	70.677	-87 36' 08.40	0.18	4	70.677				18574
1293	-43	421	8.7	M0	22 38.410	0.09	4	70.531	-43 01' 28.65	0.12	4	70.531				161
1294	-40	333	9.7	K0	22 41.471	0.18	3	70.107	-40 10' 54.52	0.01	3	70.107				162
1295	-72	98	7.86	A2	22 41.789	0.13	4	70.740	-72 35' 04.77	0.08	4	70.740		1718		18575
1296	+0	233	8.2	G5	22 45.637	--	1	71.746	+1 12' 05.04	--	1	71.746				3787
1297	-7	227	8.7	K2	22 45.662	--	1	72.730	-6 44' 07.86	--	1	72.730				3788
1298	-71	61	8.24	A5	22 46.864	0.05	4	70.827	-70 56' 08.17	0.10	4	70.827		1720		18576
1299	-15	263	8.0	G5	22 50.922	0.14	2	72.203	-15 15' 13.91	0.31	2	72.203				3789
1300	+22	226	6.07	F5	22 51.464	0.20	6	70.759	+23 15' 06.85	0.34	6	70.759	2096	1722		32096
1301	-46	393	8.8	K0	22 53.751	0.17	4	70.895	-45 52' 17.43	0.24	4	70.895				163
1302	-27	478	8.5	A3	23 09.185	0.10	4	69.310	-26 43' 02.88	0.05	4	69.310				3790

1238 A 1102, 9.0m-9.4m, 1°1, 172°.
1257 SDS, 7.5m-8.0m, 0°5, 249°.

1282 A 1127, 9.4m-9.5m, 0°2, 280°.
1290 A 1131, 10.6m, 7°3, 278°.

CATALOG OF 23,001 STARS FOR 1950.0

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	253 No*
1303	-14	276	8.3	K0	1 23 09.895	0.24	2	71.731	-13 38 55.22	0.20	2	71.731				3791
1304	-51	355	8.9	K0	23 17.287	0.10	5	71.147	-51 32 09.94	0.10	5	71.147				164
1305	-4	207	6.75	K0	23 20.212	0.28	2	71.311	-4 11 12.35	0.20	2	71.311				3792
1306	-65	130	5.82	K5	23 21.756	0.04	66	70.656	-64 37 45.29	0.04	66	70.656	1038	1728	292	31038
1307	-9	272	6.89	G5	23 25.057	0.08	2	71.822	-8 45 49.79	0.15	2	71.822		1731		3793
1308	-2	213	7.7	G0	1 23 33.488	0.16	2	71.807	-2 27 37.17	0.06	2	71.807				3794
1309	-57	309	9.2	G5	23 36.307	0.24	3	70.003	-57 24 02.06	0.09	3	70.003				3795
1310	-18	229	9.0	G0	23 37.255	0.09	2	72.216	-17 34 10.73	0.26	2	72.216				3796
1311	-36	549	9.2	K5	23 39.472	0.02	3	70.055	-36 00 37.81	0.10	3	70.055				3797
1312	-23	520	7.0	K0	23 41.430	0.13	4	69.527	-23 03 28.99	0.11	4	69.527				3798
1313	-5	258	7.8	G5	1 23 47.675	0.31	2	71.708	-4 55 58.22	0.24	2	71.708				3799
1314	-59	96	8.6	G5	23 51.218	0.21	4	71.050	-59 35 39.43	0.12	4	71.050				3800
1315*	-39	408	8.8	F5	23 58.516	0.08	4	70.003	-38 43 44.03	0.08	4	70.003				3801
1316	-66	100	8.8	G5	23 58.533	0.17	4	70.505	-65 49 31.13	0.30	4	70.505				18577
1317	+18	189	5.63	K0	23 59.401	0.07	22	71.309	+18 58 53.87	0.06	21	71.328	1039	1740	294	31039
1318	-68	56	8.4	G5	1 24 04.662	0.12	4	70.211	-67 40 31.18	0.24	4	70.211				18578
1319	-30	472	7.46	K0	24 09.414	0.10	3	70.749	-30 32 05.80	0.33	3	70.749		1742		3802
1320	-33	523	9.3	F8	24 10.590	0.13	4	70.521	-32 48 39.59	0.16	4	70.521				3803
1321	-9	276	8.8	A3	24 17.289	0.03	2	71.743	-8 50 47.27	0.15	2	71.743				3804
1322	-13	262	5.68	F0	24 23.493	0.02	93	71.141	-13 18 56.93	0.03	92	71.143	1041	1747	295	81041
1323	-34	560	9.0	K0	1 24 28.209	0.06	4	71.135	-34 25 13.52	0.12	4	71.135				3805
1324	-41	370	7.7	K5	24 30.903	0.10	4	70.949	-40 44 32.84	0.35	4	70.949				165
1325	+1	262	8.6	K2	24 33.156	0.45	2	71.276	+1 52 13.80	0.19	2	71.276				3806
1326	-21	235	7.11	K0	24 38.788	0.14	4	70.594	-20 45 02.24	0.26	4	70.594		1751		3807
1327	-31	589	9.0	G0	24 39.567	0.12	3	70.360	-31 13 41.77	0.08	3	70.360				3808
1328	-49	401	8.7	K2	1 24 47.396	0.12	4	69.939	-49 31 16.15	0.08	4	69.939				166
1329	-0	231	8.4	F2	24 50.039	0.11	2	71.791	-0 12 04.27	0.11	2	71.791				3809
1330	-80	24	9.04	G5	24 55.860	0.29	4	70.004	-80 09 20.08	0.20	4	70.004		1760		18579
1330 SP					24 55.647	0.25	4	68.799	-80 09 19.75	0.29	4	68.799		1760		18579
1331	-8	250	8.7	K0	24 58.228	0.16	2	71.796	-7 36 12.12	0.02	2	71.796				3810
1332	-10	309	7.31	K0	1 24 58.554	0.04	2	71.244	-9 33 21.29	0.19	2	71.244		1761		3811
1333	+3	201	8.6	G5	24 59.313	0.00	2	71.311	+3 37 08.43	0.01	2	71.311				3812
1334	-56	305	8.9	K0	25 06.836	0.18	4	69.290	-55 56 42.52	0.09	4	69.290				3813
1335*	-11	272	6.25	K0	25 17.224	0.26	2	71.243	-11 09 37.76	0.50	2	71.243		1769		3814
1336	-5	261	8.8	G5	25 17.259	0.28	2	71.313	-4 43 38.22	0.52	2	71.313				3815
1337	-4	213	8.1	F5	1 25 23.174	0.07	2	71.320	-3 49 55.47	0.20	2	71.320				3816
1338	-29	464	7.5	K0	25 28.178	0.09	4	69.792	-29 09 13.41	0.07	4	69.792				3817
1339	-49	407	8.5	K0	25 31.690	0.08	5	70.486	-48 45 43.74	0.09	4	70.437				167
1340	-20	271	8.8	G5	25 38.631	0.08	2	71.759	-20 03 57.70	0.02	2	71.759				3818
1341	-22	252	8.9	G5	25 43.251	0.08	4	70.017	-21 48 59.09	0.22	4	70.017				3819
1342	-18	235	8.6	A0	1 25 46.126	0.09	2	71.822	-18 19 14.27	0.10	2	71.822				3820
1343	-12	265	6.86	A5	25 47.685	0.18	2	71.798	-12 30 15.92	0.15	2	71.798		1781		3821
1344	-36	564	9.0	K0	26 04.786	0.19	3	70.762	-36 20 06.80	0.07	3	70.762				3822
1345	-58	108	9.3	F5	26 06.445	0.11	4	69.726	-58 02 37.26	0.18	4	69.726				3823
1346	-43	449	3.40	K5	26 11.729	0.04	57	71.336	-43 34 30.31	0.04	57	71.336	49	1787	301	30049
1347	-38	505	7.8	K0	1 26 19.798	0.18	4	70.291	-38 13 04.06	0.08	3	70.075				3824
1348	-72	101	7.33	G5	26 20.636	0.06	6	69.225	-71 57 47.98	0.12	6	69.225	2097	1792		32097
1348 SP					26 20.642	0.05	52	71.604	-71 57 47.62	0.12	52	71.604	2097	1792		52097
1349	-71	65	8.6	K0	26 25.161	0.18	4	69.271	-71 06 57.03	0.21	4	69.271				18580
1350	-25	597	7.10	A3	26 25.739	0.19	4	70.083	-25 03 22.06	0.16	4	70.083		1794		3825
1351	-14	286	9.0	A0	1 26 28.330	0.25	2	71.247	-14 17 27.84	0.09	2	71.247				3826
1352	-25	598	8.7	K0	26 30.988	0.21	3	71.076	-25 23 22.12	0.04	3	71.076				3827
1353	-18	240	6.67	F5	26 31.700	0.01	2	71.306	-18 11 43.94	0.34	2	71.306		1797		3828
1354	-37	564	7.52	M0	26 34.693	0.07	4	70.301	-37 05 29.04	0.11	4	70.301		1798		3829
1355	-75	88	7.59	M0	26 44.908	0.11	4	69.747	-75 18 08.20	0.05	4	69.747		1800		18581
1355 SP					1 26 44.893	0.12	4	69.245	-75 18 08.12	0.21	4	69.245		1800		18581
1356	-3	204	8.3	K8	26 47.176	0.16	2	71.803	-3 27 17.07	0.01	2	71.803				3830
1357	-36	568	9.0	F8	27 06.627	0.12	4	70.805	-35 39 24.22	0.10	4	70.805				3831
1358	-42	522	8.8	K0	27 07.233	0.10	4	70.310	-42 05 25.45	0.10	4	70.310				168
1359	-68	59	7.5	K0	27 10.960	0.11	4	69.770	-68 25 59.37	0.05	4	69.770				18582
1360	-22	254	5.13	A0	1 27 12.290	0.02	118	71.102	-21 53 14.49	0.02	116	71.090	1043	1808	303	81043
1361	-61	109	8.39	K0	27 12.457	0.13	4	70.253	-61 20 27.39	0.14	4	70.253		1809		3832
1362	-32	582	8.9	K2	27 13.055	0.11	3	70.840	-32 16 55.42	0.02	3	70.840				3833
1363	-43	456	8.1	K0	27 16.616	0.07	5	70.708	-43 24 50.52	0.11	4	70.714				169
1364	-26	491	6.55	K0	27 21.099	0.10	5	70.231	-25 52 32.83	0.10	5	70.231	2098	1810	305	32098
1365	-79	37	8.09	G5	1 27 28.130	0.06	4	69.935	-79 17 56.51	0.30	4	69.935		1815		18583
1365 SP					27 28.179	0.28	4	69.760	-79 17 56.03	0.53	4	69.760		1815		18583
1366	-53	332	7.39	K5	27 31.717	0.26	4	70.019	-52 37 26.79	0.12	4	70.019		1818		3834
1367	-16	253	7.87	K2	27 31.800	0.01	2	70.802	-15 59 11.83	0.18	2	70.802			307	3835
1368	+5	194	5.12	K2	27 34.117	0.10	6	70.760	+5 53 11.37	0.12	6	70.760	2099	1819	308	32099
1369	-20	277	8.6	G5	1 27 36.228	0.13	2	72.188	-19 51 39.39	0.04	2	72.188				3836
1370	-33	545	9.1	K2	27 40.171	0.21	3	71.035	-33 18 29.36	0.15	3	71.035				3837
1371	-27	508	8.3	K0	27 40.509	0.18	3	70.105	-27 13 44.91	0.11	3	70.105				3838
1372	+0	243	8.5	G0	27 57.125	0.01	2	72.428	+1 06 05.49	0.43	2	72.428				3839
1373	-1	199	8.6	K2	28 00.542	--	1	72.760	-1 05 44.09	--	1	72.760				3840

1315 9.3m-9.8m, 0°5, 228°.

1335 A 1162, 6.3m-9.9m, 1°6, 302°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
1374	-11	283	8.7	K0	1 28 06.874	-	1	72.845	-11 05 57.20	-	1	72.845				3841
1375	-13	273	8.6	K2	28 07.894	-	1	71.937	-13 14 00.14	-	1	71.937				3842
1376	-23	543	8.2	K0	28 09.044	0.11	3	69.756	-23 30 04.35	0.22	3	69.756				3843
1377	-61	113	9.54	K5	28 11.128	0.30	3	71.142	-60 40 01.67	0.21	3	71.142		1831		3844
1378*	-8	260	7.9	G5	28 14.777	0.05	2	71.840	-8 19 36.42	0.00	2	71.840				3845
1379	-43	461	9.4	F8	1 28 20.608	0.31	4	71.219	-42 57 51.63	0.17	4	71.219				170
1380	-6	284	8.3	K5	28 37.062	0.27	3	71.771	-5 48 02.27	0.31	3	71.771				3846
1381	+14	231	3.72	G5	28 48.246	0.04	15	71.370	+15 05 19.55	0.08	15	71.370	50	1839	309	30050
1382	-31	614	8.5	K5	28 50.947	0.14	4	69.506	-31 33 30.35	0.24	4	69.506				3847
1383	-47	450	9.3	F8	28 56.197	0.09	5	70.732	-47 31 17.14	0.08	4	70.744				171
1384	-10	326	7.9	K0	1 29 01.530	0.26	2	70.861	-9 57 30.24	-	1	70.962				3848
1385	-17	274	8.3	K0	29 07.478	0.09	2	71.236	-17 01 40.37	0.07	2	71.236				3849
1386	-49	425	3.96	K0	29 10.630	0.02	114	70.974	-49 19 52.09	0.03	113	70.974	1044	1847	310	31044
1387	-63	120	8.5	G5	29 13.393	0.12	4	69.757	-62 54 36.22	0.31	4	69.757				3850
1388	-34	594	9.4	G5	29 19.070	0.12	4	70.735	-34 24 26.01	0.13	4	70.735				3851
1389	-7	250	7.73	K2	1 29 30.241	0.38	2	70.738	-6 58 32.27	0.03	2	70.738		1856		3852
1390	-3	213	8.7	F8	29 32.914	0.08	2	71.219	-2 58 49.78	0.11	2	71.219				3853
1391	+0	251	8.0	A3	29 44.156	0.22	2	70.800	+1 18 55.19	0.28	2	70.800				3854
1392	-15	279	8.2	A0	29 45.706	0.09	2	71.266	-14 44 56.47	0.29	2	71.266				3856
1393	-53	337	9.4	G5	29 45.714	0.19	4	69.536	-53 10 40.42	0.21	4	69.536				3855
1394	-51	377	7.96	F0	1 29 54.535	0.09	4	69.812	-50 49 31.14	0.10	4	69.812		1866		172
1395	-65	136	8.6	M1	29 57.417	0.07	4	69.980	-64 52 01.18	0.11	4	69.980				18584
1396	-39	446	8.6	K0	29 59.551	0.22	4	70.613	-39 21 16.81	0.17	4	70.613				3857
1397	-19	266	8.04	K2	30 11.514	0.15	2	71.254	-19 13 59.37	0.21	2	71.254		1872		3858
1398	+4	266	8.8	G0	30 16.890	0.31	2	71.318	+4 31 05.13	0.23	2	71.318				3859
1399	-8	265	8.9	A3	1 30 22.262	0.05	2	71.268	-8 24 21.47	0.06	2	71.268				3860
1400	-46	424	9.9	G5	30 23.838	0.18	4	70.493	-46 23 22.37	0.05	4	70.493				173
1401	-0	247	8.2	K0	30 25.116	0.22	2	71.303	-0 07 46.15	0.18	2	71.303				3861
1402	-21	249	8.4	M0	30 28.183	0.12	4	68.606	-21 20 39.28	0.14	4	68.606				3862
1403	-18	254	8.6	K2	30 28.466	0.08	2	71.291	-17 52 04.91	0.09	2	71.291				3863
1404	-49	429	9.2	K0	1 30 29.144	0.09	4	71.036	-48 54 06.23	0.09	4	71.036				174
1405	-9	298	6.60	A0	30 33.923	0.05	3	70.762	-9 16 15.53	0.07	2	70.802		1877		3864
1406	-41	415	9.0	K0	30 35.945	0.16	4	70.214	-41 30 40.73	0.06	4	70.214				175
1407	-45	512	8.8	K2	30 36.079	0.13	4	70.024	-44 59 43.30	0.18	4	70.024				176
1408	-55	321	9.0	K0	30 39.030	0.13	3	70.118	-54 59 56.05	0.20	3	70.118				3865
1409	-37	589	5.49	K0	1 30 41.898	0.06	6	68.998	-37 07 17.40	0.11	6	68.998	2101	1881	314	32101
1410	-63	122	8.8	G5	30 47.937	0.04	4	70.253	-63 06 02.28	0.26	4	70.253				3866
1411	-24	658	6.92	K0	30 53.227	0.13	3	69.128	-24 25 58.33	0.30	3	69.128		1883		3867
1412	-26	527	7.9	K0	30 54.631	0.18	4	69.189	-25 55 23.46	0.26	4	69.189				3868
1413	-50	412	8.7	K0	31 02.709	0.21	4	69.976	-50 22 34.60	0.15	4	69.976				177
1414	-2	242	8.3	G5	1 31 03.657	0.21	2	71.236	-2 07 17.68	0.34	2	71.236				3869
1415	-38	528	8.2	G0	31 04.178	0.19	4	70.032	-38 30 03.46	0.10	4	70.032				3870
1416	-77	54	8.6	G0	31 10.968	0.17	4	69.924	-77 10 14.03	0.15	4	69.924				18585
1416 SP					31 10.990	0.26	4	70.299	-77 10 13.36	0.49	4	70.299				18585
1417	-78	36	7.61	G5	31 20.739	0.09	4	69.514	-78 19 32.27	0.06	4	69.514		1891		18586
1417 SP					31 20.770	0.18	4	69.736	-78 19 32.51	0.33	4	69.736		1891		18586
1418	+1	277	8.4	A3	31 21.109	0.28	2	71.240	+2 18 33.92	0.02	2	71.240				3871
1419	-48	405	9.3	K2	31 27.855	0.17	4	69.958	-48 15 05.48	0.07	4	69.958				178
1420	+3	216	8.3	F5	31 28.352	0.30	2	70.861	+3 52 22.06	0.55	2	70.861				3872
1421	-40	379	9.7	K0	31 28.498	0.22	4	69.992	-40 10 03.10	0.02	4	69.992				179
1422	+1	279	8.1	G0	1 31 32.775	0.21	2	71.227	+2 11 29.13	0.13	2	71.227		1893		3873
1423	-58	116	7.9	K0	31 35.031	0.04	4	70.260	-57 49 57.79	0.17	4	70.260				3874
1424	-44	437	8.6	K0	31 44.468	0.17	4	70.820	-44 36 15.22	0.10	4	70.820				180
1425	-7	257	8.6	G5	31 45.570	0.14	2	71.698	-6 31 41.51	0.30	2	71.698				3875
1426	-30	519	8.6	K5	31 52.791	0.11	4	69.246	-30 12 42.86	0.18	4	69.246				3876
1427	-28	489	7.72	A2	1 31 58.312	0.07	4	69.260	-27 37 08.66	0.20	4	69.260		1897		3877
1428	-34	611	9.2	K5	31 59.848	0.08	4	70.036	-34 34 45.59	0.05	4	70.036				3878
1429	-58	120	8.2	K0	32 09.182	0.10	4	70.058	-58 35 23.87	0.21	4	70.058				3879
1430	-59	107	8.3	K0	32 14.300	0.05	4	70.237	-59 34 05.48	0.10	4	70.237				3881
1431	+0	256	7.02	F8	32 14.341	0.16	2	71.296	+0 41 29.07	0.26	2	71.296		1909		3880
1432	-29	513	8.2	K2	1 32 14.860	0.11	4	69.491	-28 53 39.68	0.07	4	69.491				3882
1433	-8	273	8.8	A2	32 15.563	0.27	2	71.291	-7 37 49.91	0.20	2	71.291				3883
1434	-4	237	6.78	K0	32 19.240	0.05	3	70.757	-3 46 44.60	0.08	2	70.794		1913		3884
1435	-70	79	9.2	K0	32 19.364	0.29	4	70.032	-70 23 28.49	0.21	4	70.032				18587
1436	-35	552	8.02	K0	32 28.770	0.07	4	70.609	-35 36 04.87	0.18	4	70.609		1916		3885
1437	-3	224	7.5	A0	1 32 33.701	0.26	2	71.234	-2 35 26.87	0.20	2	71.234				3886
1438	-15	283	8.8	K0	32 38.914	0.10	2	71.736	-14 39 37.20	0.04	2	71.736				3887
1439	-65	138	8.9	M1	32 42.440	0.17	4	70.239	-64 46 27.46	0.17	4	70.239				18588
1440	-50	424	8.06	K5	32 44.095	0.11	4	70.169	-50 03 36.45	0.12	4	70.169		1921		181
1441	+0	257	9.0	A0	32 45.878	0.03	2	71.781	+1 01 31.65	0.72	2	71.781				3888
1442	-8	274	8.6	F5	1 32 48.359	0.19	2	71.775	-7 50 03.70	0.12	2	71.775				3889
1443	-32	614	8.2	K0	32 48.731	0.11	4	69.562	-31 39 09.60	0.17	4	69.562				3890
1444	-54	349	9.2	K0	32 50.158	0.22	4	71.123	-54 13 50.71	0.08	4	71.123				3891
1445	-69	70	9.4	F5	32 53.418	0.21	4	71.104	-69 11 20.26	0.24	4	71.104				18589
1446	-14	299	7.29	G0	32 58.479	0.10	2	71.775	-13 38 11.79	0.13	2	71.775		1926		3892

1378 A 1195, 8.3m-11.0m, 1"2, 268°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
1447	+ 4	277	8.8	K0	1 32 58.518	0.01	2	71.814	+ 4 45 22.06	0.62	2	71.814				3893
1448	-12	294	8.9	A2	33 07.916	0.05	2	72.118	-12 11 48.92	0.71	2	72.118				3894
1449	-26	538	8.7	K0	33 08.138	0.19	4	70.393	-25 41 16.06	0.23	4	70.393				3895
1450	- 5	285	8.0	F5	33 09.462	0.08	2	71.841	- 5 19 58.03	0.26	2	71.841				3896
1451	-80	28	7.26	A0	33 09.589	0.10	6	69.034	-80 10 57.11	0.10	6	69.034	2103	1930		32103
1451	SP				1 33 09.499	0.07	6	68.798	-80 10 57.19	0.31	6	68.798	2103	1930		52103
1452	-25	651	8.4	K0	33 13.406	0.09	4	70.701	-24 45 32.78	0.06	4	70.701				3897
1453	-65	139	8.0	G5	33 13.694	0.20	3	70.756	-65 33 15.47	0.06	3	70.756				18590
1454	-79	40	6.06	G5	33 17.513	0.03	94	71.239	-78 45 33.82	0.04	91	71.237	53	1934	320	30053
1454	SP				33 17.538	0.07	33	70.736	-78 45 33.77	0.0	32	70.744	53	1934	320	50053
1455	-18	265	8.0	G5	1 33 18.788	0.01	2	72.160	-17 33 29.50	0.26	2	72.160				3898
1456	-42	554	9.36	F8	33 20.657	0.15	4	70.533	-42 34 51.09	0.07	4	70.533		1936		182
1457	-40	394	8.4	M0	33 27.511	0.07	4	71.014	-40 05 36.76	0.10	4	71.014				183
1458	-16	270	5.88	K0	33 32.617	0.11	6	70.118	-15 39 19.07	0.11	6	70.118	2104	1941	323	32104
1459	- 7	265	8.9	F8	33 38.402	--	1	71.833	- 6 39 38.16	--	1	71.833				3900
1460	-40	395	6.54	F2	1 33 39.498	0.10	6	71.527	-40 12 06.34	0.14	6	71.527	2105	1943	324	32105
1461	-75	104	9.0	K0	33 40.388	0.16	3	71.077	-74 55 47.09	0.25	3	71.077				18591
1462	+ 3	218	7.87	K0	33 41.177	0.10	2	72.314	+ 4 03 33.85	0.26	2	72.314			325	3901
1463	-37	603	7.7	M0	33 45.148	0.06	4	70.517	-36 42 30.95	0.16	4	70.517				3902
1464	-26	545	8.4	G5	33 50.116	0.07	3	69.817	-26 10 35.75	0.16	3	69.817				3903
1465	-37	604	9.0	A0	1 33 55.062	0.16	4	71.219	-37 33 05.20	0.18	4	71.219				3905
1466	-34	624	8.4	G5	34 04.530	0.06	4	70.999	-33 38 16.34	0.18	4	70.999				3906
1467	-23	591	8.1	K0	34 23.134	0.10	3	70.128	-22 41 48.26	0.10	3	70.128				3907
1468	+11	205	5.63	F0	34 26.534	0.05	31	70.887	+11 53 12.60	0.07	31	70.887	1046	1954	328	81046
1469	-39	479	8.8	K2	34 30.062	0.09	4	70.727	-39 26 51.05	0.09	4	70.727				3909
1470	-32	623	7.16	G5	1 34 32.284	0.17	4	70.831	-32 33 06.21	0.20	4	70.831		1957		3910
1471	-45	531	9.2	G5	34 34.696	0.08	2	70.217	-45 03 36.17	0.14	2	70.217				184
1472	-73	92	8.9	K5	34 38.552	0.07	4	71.067	-72 59 39.55	0.17	4	71.067				18592
1473	-49	447	6.86	G5	34 45.723	0.11	4	71.231	-49 03 31.41	0.18	4	71.231		1961		185
1474	-43	496	9.1	G0	34 55.127	0.15	4	70.535	-42 38 29.54	0.14	4	70.535				186
1475	-10	343	6.40	F5	1 35 08.025	--	1	71.888	- 9 39 30.59	--	1	71.888	2109	1971	333	3915
1476	-56	323	8.94	K0	35 17.268	0.10	2	69.722	-56 31 29.92	0.07	2	69.722		1973		3916
1477	- 4	249	6.78	K5	35 19.958	0.28	2	71.352	- 3 41 40.78	0.07	2	71.352		1975		3917
1478	-52	201	9.3	K0	35 22.017	0.07	2	70.147	-51 41 41.24	0.01	2	70.147				187
1479	-62	127	8.8	G5	35 28.024	0.19	3	70.445	-62 11 23.30	0.14	3	70.445				3918
1480	-27	551	8.3	G5	1 35 39.447	0.05	4	69.513	-27 28 34.67	0.17	4	69.513				3919
1481	- 7	270	8.6	G5	35 41.561	--	1	72.708	- 7 10 14.13	--	1	72.708				3920
1482	+ 1	293	7.09	K0	35 44.939	0.04	2	71.784	+ 2 19 56.25	0.07	2	71.784			334	3921
1483	-57	334	0.60	B5	35 51.483	0.05	3	69.814	-57 29 26.05	0.21	3	69.814	54	1979	335	30054
1484	+20	264	6.86	K2	35 52.736	0.13	7	71.508	+21 08 40.32	0.15	7	71.508	2110	1980	336	32110
1485	-77	58	8.2	M1	1 35 53.344	0.08	4	70.516	-76 37 34.66	0.09	4	70.516				18593
1485	SP				35 53.284	0.16	4	70.991	-76 37 34.41	0.15	4	70.991				18593
1486	-52	202	8.4	K0	35 56.384	0.23	4	70.497	-52 05 07.11	0.09	4	70.497				3922
1487	-46	453	6.96	K0	35 58.450	0.08	6	71.217	-46 20 16.41	0.11	6	71.217	2111	1981	337	32111
1488	-16	280	8.2	F0	36 00.745	--	1	72.681	-15 42 58.38	--	1	72.681				3923
1489	-35	572	9.2	K0	1 36 03.872	0.09	4	69.991	-35 28 02.13	0.18	4	69.991				3924
1490	- 9	315	8.7	K0	36 07.022	0.04	2	71.816	- 8 45 47.52	0.08	2	71.816				3925
1491	-61	124	7.29	G5	36 08.669	0.19	4	70.790	-60 45 55.76	0.26	4	70.790		1984		3926
1492	-32	639	7.40	G0	36 21.948	0.11	4	70.281	-32 25 22.18	0.14	4	70.281		1992		3927
1493	-22	272	5.68	F0	36 28.580	0.09	6	70.922	-21 31 45.27	0.16	6	70.922	2113	1995		32113
1494	-25	670	6.42	A0	1 36 29.201	0.14	4	69.978	-25 16 32.78	0.08	4	69.978		1996		3928
1495	-11	315	8.1	F0	36 31.555	0.18	2	70.847	-10 45 07.65	0.24	2	70.847				3929
1496	-45	541	9.4	F5	36 32.341	0.18	4	70.723	-45 07 57.73	0.27	4	70.723				188
1497	-67	107	7.50	K0	36 35.083	0.07	4	70.317	-66 48 37.02	0.12	4	70.317		2001		18594
1498	-14	311	9.1	G0	36 35.402	0.19	2	71.337	-14 10 29.27	0.17	2	71.337				3930
1499	-68	69	8.2	G5	1 36 45.034	0.18	4	70.070	-67 49 26.24	0.22	4	70.070				18595
1500	+ 1	295	8.8	K0	36 48.068	0.19	2	71.223	+ 1 56 14.94	0.47	2	71.223				3931
1501	- 0	257	7.5	A3	36 51.166	0.05	2	71.254	+ 0 21 31.57	0.26	2	71.254				3932
1502	-76	117	8.3	K2	36 51.216	0.15	3	70.412	-75 41 00.17	0.42	3	70.412				18596
1502	SP				36 51.272	0.05	4	69.796	-75 40 59.79	0.57	4	69.796				18596
1503	-19	284	8.6	K2	1 36 52.458	0.09	2	71.249	-19 03 13.36	0.00	2	71.249				3933
1504	-46	460	8.1	G5	36 53.059	0.13	4	70.263	-46 01 41.59	0.21	4	70.263				189
1505	-48	435	9.9	G5	36 54.476	0.06	4	70.324	-47 55 25.67	0.08	4	70.324				190
1506	-18	279	7.8	A5	36 56.252	0.12	2	71.280	-18 02 48.46	0.35	2	71.280				3934
1507	-29	542	7.41	A3	36 58.196	0.07	6	69.725	-29 16 32.92	0.05	6	69.725	2114	2006	340	3935
1508	-48	436	8.7	K2	1 37 04.855	0.22	4	71.036	-47 40 03.04	0.21	4	71.036				191
1509	+ 2	244	8.2	G0	37 08.571	0.17	2	71.316	+ 3 12 08.66	0.47	2	71.316				3936
1510	-38	570	10.0	G2	37 13.409	0.11	4	70.232	-38 25 08.64	0.08	4	70.232				3937
1511	-38	572	9.39	K0	37 27.509	0.16	3	70.157	-37 43 32.62	0.09	3	70.157		2022		3938
1512	- 3	235	8.8	F8	37 27.755	0.18	2	71.357	- 3 11 43.16	0.26	2	71.357				3939
1513	- 8	289	8.7	F5	1 37 31.668	0.01	2	71.359	- 7 42 06.30	0.04	2	71.359				3940
1514	-54	361	9.2	F0	37 41.661	0.08	4	69.490	-53 50 42.04	0.12	4	69.490				3941
1515	-41	452	9.9	K5	37 44.835	0.11	3	70.451	-40 57 49.73	0.29	3	70.451				192
1516	- 9	316	8.8	K0	37 47.523	0.10	2	71.243	- 9 29 43.46	0.10	2	71.243				3942
1517	-24	700	8.6	K0	37 54.000	0.11	4	69.432	-24 05 56.17	0.14	4	69.432				3943

1462 A 1257, 11.6m, 5°1, 197°.

1496 9.9m-10.4m, 0°2, 157°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
1518	-2	270	8.3	F0	1 37 54.025	0.04	2	71.325	-1 51 15.65	0.08	2	71.325				3944
1519	-55	337	7.56	K0	37 55.319	0.12	4	68.567	-55 24 08.90	0.24	4	68.567		2031		3945
1520	-35	586	7.76	G5	38 02.471	0.11	4	70.346	-34 43 45.87	0.05	4	70.346		2034		3946
1521	-86	18	9.2	K0	38 02.604	0.40	5	70.961	-86 11 24.66	0.10	4	71.030				18597
1521 SP					38 02.610	0.19	4	70.580	-86 11 24.98	0.21	4	70.580				18597
1522	-49	469	7.35	M0	1 38 04.657	0.19	4	70.439	-49 00 50.51	0.12	4	70.439		2035		193
1523	-32	651	8.6	G5	38 05.765	0.08	3	69.424	-31 46 15.06	0.32	3	69.424				3947
1524	-39	500	8.8	K5	38 14.890	0.18	5	70.983	-39 02 35.47	0.20	5	70.983				3948
1525p	-82	28	7.6	G5	38 16.657	0.15	4	69.811	-82 32 06.17	0.21	4	69.811		2037		18598
1525 SP					38 16.673	0.34	4	69.813	-82 32 06.60	0.37	4	69.813		2037		18598
1526	-0	260	8.9	F8	1 38 17.464	0.23	2	71.784	+0 09 27.92	0.22	2	71.784				3949
1527	-48	442	9.5	K0	38 20.290	0.12	3	70.817	-48 09 56.12	0.48	3	70.817				194
1528	-6	315	8.3	G5	38 21.493	0.18	2	71.347	-6 24 53.94	0.07	2	71.347				3950
1529*	-21	278	8.5	F2	38 27.119	0.20	3	70.459	-20 37 03.39	0.15	3	70.459				3951
1530	+25	276	6.26	F5	38 30.832	0.09	6	70.511	+25 29 36.96	0.15	6	70.511	2115	2042		32115
1531	-68	73	7.99	K0	1 38 31.247	0.18	4	69.232	-68 30 39.43	0.11	4	69.232		2043		18599
1532	-41	455	9.3	G0	38 33.097	0.07	4	71.257	-41 23 43.92	0.10	4	71.257				195
1533	-59	122	8.6	K0	38 45.023	0.08	5	70.740	-58 54 00.48	0.05	5	70.740				3952
1534	+4	293	4.68	K0	38 49.535	0.02	105	70.890	+5 14 07.23	0.03	105	70.890	56	2055	343	80056
1535	-34	661	7.26	G5	38 57.006	0.12	3	70.752	-33 39 02.05	0.10	3	70.752		2057		3953
1536	-26	593	9.0	K2	1 38 58.960	0.12	3	69.650	-26 21 32.41	0.21	3	69.650				3954
1537	-22	280	8.7	K0	39 02.065	0.13	4	70.400	-22 23 18.81	0.19	4	70.400				3955
1538	+3	230	8.2	A0	39 20.103	0.08	2	72.126	+4 25 14.76	0.20	2	72.126				3956
1539	-28	532	8.4	G0	39 27.126	0.12	4	70.758	-28 13 20.51	0.12	4	70.758				3957
1540	-41	461	9.13	K0	39 28.594	0.07	5	70.744	-40 39 22.14	0.09	4	70.759		2071		196
1541	-46	474	8.7	F0	1 39 30.920	0.19	4	70.714	-46 15 34.65	0.04	4	70.714				197
1542	-5	300	8.5	G5	39 32.128	0.08	2	71.660	-5 11 47.18	0.06	2	71.660				3958
1543	-35	597	8.43	G5	39 44.619	0.10	4	70.719	-35 05 17.59	0.17	4	70.719		2078		3959
1544	-4	259	8.3	F8	39 48.801	0.17	2	72.286	-3 40 35.23	0.09	2	72.286				3961
1545	-18	287	7.40	G0	39 49.332	0.25	2	71.825	-18 08 27.13	0.03	2	71.825		2081		3960
1546	-37	650	5.64	A0	1 39 50.730	0.05	22	71.021	-37 05 02.67	0.06	22	71.021	58	2082	348	30058
1547	-83	28	7.36	K0	39 51.410	0.17	4	69.590	-83 30 01.23	0.21	4	69.590		2083		18600
1547 SP					39 51.468	0.09	4	69.785	-83 30 01.23	0.24	4	69.785		2083		18600
1548	-39	512	8.1	G5	39 51.838	0.11	4	70.826	-39 23 57.63	0.15	4	70.826				3962
1549	-2	278	7.9	F2	39 52.333	0.17	2	72.332	-2 24 42.88	0.48	2	72.332		2084	349	3963
1550	-32	666	5.28	K0	1 39 53.115	0.04	24	70.542	-32 34 42.88	0.06	24	70.542	1048	2085	350	31048
1551*	-13	312	8.0	F5	40 02.416	-	1	72.708	-12 34 20.12	-	1	72.708				3964
1552	-9	324	7.05	G5	40 02.578	0.13	2	71.907	-8 54 40.68	0.26	2	71.907		2088		3965
1553	-61	130	5.58	K0	40 05.352	0.25	6	70.697	-61 02 27.46	0.14	6	70.697	2116	2091	351	32116
1554	-85	17	5.63	K0	40 05.976	0.05	53	71.149	-85 01 22.05	0.06	53	71.149	916	2092	352	30916
1554 SP					1 40 06.023	0.04	43	70.601	-85 01 22.00	0.08	40	70.571	916	2092	352	50916
1555	-29	553	8.5	F5	40 09.632	0.12	3	70.482	-28 49 51.29	0.15	3	70.482				3966
1556	-4	260	5.27	G5	40 11.684	0.05	27	71.849	-3 56 29.49	0.06	27	71.849	1049	2093	353	31049
1557	-20	318	7.31	K0	40 12.603	0.03	4	71.093	-20 25 26.85	0.06	4	71.093		2094		3967
1558	-56	337	7.70	K0	40 14.978	0.08	5	70.931	-56 07 02.28	0.20	5	70.931		2096		3968
1559	-63	127	9.0	A5	1 40 16.584	0.07	4	69.551	-63 32 48.82	0.16	4	69.551				3969
1560	-15	304	8.0	K0	40 34.619	0.02	2	71.236	-14 44 33.96	0.64	2	71.236				3970
1561	-42	592	7.9	K0	40 34.655	0.08	4	70.290	-41 53 55.24	0.10	4	70.290				198
1562	-66	109	8.9	G5	40 39.153	0.15	4	69.974	-66 16 10.12	0.10	4	69.974				18601
1563	-36	647	8.7	K0	40 45.779	0.12	3	70.134	-35 46 34.86	0.11	3	70.134				3971
1564	+0	278	8.4	G5	1 41 12.727	0.18	2	71.244	+0 39 05.34	0.21	2	71.244				3972
1565	+2	255	8.1	K0	41 16.397	0.19	2	71.333	+3 20 20.65	0.36	2	71.333				3973
1566	-6	327	8.6	K0	41 21.053	0.34	2	71.340	-5 46 07.15	0.06	2	71.340				3974
1567	-39	522	8.4	G5	41 21.383	0.14	4	70.027	-38 44 46.70	0.20	4	70.027				3975
1568	-8	302	7.5	A0	41 22.706	0.18	2	71.758	-7 43 48.33	0.11	2	71.758				3976
1569	+4	305	8.6	K0	1 41 22.780	0.07	2	71.376	+4 44 41.47	0.08	2	71.376				3977
1570	-65	145	9.0	G5	41 23.528	0.16	4	69.791	-65 09 36.44	0.08	4	69.791				18602
1571	-0	264	8.2	G5	41 26.320	0.07	2	71.810	-0 25 11.23	0.09	2	71.810				3978
1572	-61	133	8.13	K0	41 27.130	0.13	4	70.038	-61 36 48.25	0.14	4	70.038		2115		3979
1573	-13	314	8.5	G5	41 28.284	0.11	2	71.820	-13 24 04.16	0.02	2	71.820				3980
1574	-30	591	9.0	G5	1 41 32.218	0.19	4	69.796	-30 03 44.23	0.05	4	69.796				3981
1575	-37	663	8.7	K0	41 38.408	0.11	4	70.023	-37 31 29.67	0.14	4	70.023				3982
1576	-31	712	8.6	A3	41 40.370	0.26	4	70.209	-30 58 41.02	0.14	4	70.209				3983
1577	-16	295	3.65	K0	41 42.162	0.02	126	70.842	-16 11 42.75	0.03	125	70.843	59	2123	359	80059
1578	-58	139	9.4	G5	41 43.187	0.12	5	70.579	-57 56 15.24	0.12	5	70.579				3984
1579	-24	734	8.7	G0	1 41 44.826	0.14	4	70.967	-23 51 05.66	0.03	4	70.967				3985
1580	-70	91	9.0	K0	41 49.825	0.13	4	70.212	-69 49 25.13	0.16	4	70.212				18603
1581	-19	300	8.4	K5	41 52.807	0.30	2	71.258	-19 15 36.51	0.09	2	71.258				3986
1582	-32	680	8.7	G5	42 04.981	0.10	4	70.292	-31 52 09.16	0.17	4	70.292				3987
1583	-12	325	8.6	K0	42 12.321	-	1	72.559	-11 45 30.12	-	1	72.559				3988
1584	-17	309	8.6	K2	1 42 12.327	0.06	2	72.143	-17 04 57.98	0.04	2	72.143				3989
1585	-7	288	8.3	F0	42 13.650	0.06	2	71.960	-6 55 11.59	0.49	2	71.960				3990
1586	-80	30	7.88	F0	42 21.562	0.08	4	69.079	-80 09 51.53	0.22	4	69.079		2133		18604
1586 SP					42 21.641	0.29	4	69.277	-80 09 51.30	0.15	4	69.277		2133		18604
1587	-35	614	6.82	K0	42 23.045	0.06	3	69.834	-34 39 23.15	0.08	3	69.834		2134		3991

1525 SDS, 8.4m, 5°S, 55°
 1529 9.6m-9.6m, 0°2', 114°.

1551 A 1347, 9.3m-9.8m, 0°7', 319°.

CATALOG OF 23,001 STARS FOR 1950.0

257

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
1588	+ 1	313	7.1	K0	1 42 29.931	0.01	2	71.844	+ 2 15 10.47	0.13	2	71.844				3992
1589	-45	574	8.2	G5	42 31.628	0.09	4	70.468	-45 30 21.01	0.03	4	70.468				199
1590	-33	606	8.4	G5	42 39.598	0.16	4	70.324	-33 04 38.34	0.04	4	70.324				3993
1591	-51	417	7.58	K0	42 41.297	0.19	4	69.267	-51 16 15.80	0.17	4	69.267				200
1592	+ 8	273	4.50	K0	42 45.075	0.04	44	71.759	+ 8 54 25.93	0.06	44	71.759	60	2137	360	30060
1593	-50	478	8.6	F8	1 42 46.634	0.20	3	70.651	-49 44 28.96	0.08	3	70.651				201
1594	-26	620	8.4	K2	42 48.696	0.05	4	70.479	-26 06 01.63	0.19	4	70.479				3994
1595	- 3	250	7.3	M0	42 49.332	0.25	2	71.787	- 3 25 09.27	0.09	2	71.787				3995
1596	-16	301	8.4	G0	42 50.471	0.06	2	72.167	-16 08 40.21	0.01	2	72.167				3996
1597	-59	132	8.6	G5	42 55.085	0.06	4	70.247	-59 01 20.01	0.06	4	70.247				3997
1598	-22	290	8.2	G0	1 43 03.107	0.17	4	70.718	-22 14 13.81	0.16	4	70.718				3998
1599	-15	309	9.0	K0	43 08.024	0.30	2	71.751	-15 25 46.67	0.02	2	71.751				3999
1600	-27	592	7.5	M0	43 14.055	0.13	4	70.266	-26 38 49.52	0.14	4	70.266				4000
1601	-36	664	8.5	G5	43 14.596	0.10	3	69.571	-36 21 24.43	0.10	3	69.571				4001
1602	-54	374	9.2	G0	43 14.860	0.09	4	69.788	-54 15 29.20	0.29	4	69.788				4002
1603	- 2	291	7.8	G5	1 43 17.422	0.20	2	71.277	- 2 10 34.92	0.09	2	71.277				4003
1604p	-25	704	5.42	F0	43 18.505	0.04	43	70.926	-25 18 07.64	0.05	43	70.926	61	2145	361	30061
1605	- 4	269	7.8	G5	43 26.246	0.10	2	70.805	- 4 28 41.62	0.04	2	70.805				4004
1606	- 6	336	5.53	G5	43 28.545	0.05	6	69.506	- 5 58 58.43	0.11	6	69.506	2117	2148		32117
1607	-61	141	8.74	G5	43 29.320	0.10	4	69.480	-60 38 17.86	0.21	4	69.480		2149		4005
1608	-43	542	9.2	G5	1 43 46.592	0.12	5	69.999	-43 04 39.08	0.19	4	69.829				202
1609	-44	512	8.56	G5	43 54.690	0.10	4	70.178	-44 09 47.75	0.10	4	70.178		2157		203
1610	-11	341	7.8	G5	44 03.051	0.00	2	70.731	-10 50 50.87	0.27	2	70.731				4006
1611	-47	538	9.35	F8	44 11.236	0.19	4	70.201	-47 11 49.02	0.07	4	70.201		2164		204
1612	-54	377	5.14	A0	44 12.251	0.11	6	69.631	-53 46 20.12	0.17	6	69.631	2118	2165	365	32118
1613	-24	751	8.1	G5	1 44 20.846	0.10	4	69.050	-24 15 51.06	0.12	4	69.050				4007
1614	-74	126	7.78	F0	44 26.739	0.31	3	69.351	-73 48 10.18	0.34	3	69.351		2170		18605
1615	-14	335	6.76	B9	44 31.974	0.12	2	71.242	-14 08 16.97	0.10	2	71.242		2172	367	4008
1616	-28	559	8.5	F5	44 37.625	0.16	4	69.448	-27 55 07.59	0.05	4	69.448				4009
1617	-10	376	8.4	K2	44 37.646	0.13	2	71.227	- 9 50 54.49	0.06	2	71.227				4010
1618	-42	630	7.69	K2	1 44 39.968	0.12	4	70.015	-42 22 52.16	0.07	4	70.015		2175		205
1619	+ 3	242	8.5	K2	44 46.395	0.09	2	71.257	+ 3 40 05.72	0.03	2	71.257				4011
1620	+ 0	289	8.0	G5	44 47.481	0.13	2	71.255	+ 0 33 47.21	0.03	2	71.255				4012
1621	-31	738	9.3	G5	44 48.092	0.10	4	68.821	-31 37 13.53	0.27	4	68.821				4013
1622	-50	487	8.5	G5	44 50.102	0.07	4	70.622	-49 53 45.10	0.09	4	70.622				206
1623	-26	631	8.5	K0	1 44 51.022	0.11	4	68.996	-25 56 36.19	0.14	4	68.996				4014
1624	-72	117	8.9	K0	44 54.097	0.22	4	69.742	-71 53 38.12	0.14	4	69.742				18606
1625	-62	139	7.58	F5	45 00.654	0.13	4	69.950	-61 38 24.76	0.17	4	69.950		2179		4015
1626	- 8	312	8.6	K2	45 01.753	0.01	2	71.268	- 8 07 33.06	0.04	2	71.268				4016
1627	- 0	274	8.1	G5	45 02.101	0.11	2	71.268	- 0 05 37.67	0.11	2	71.268		2180		4017
1628	-68	84	8.9	G5	1 45 05.473	0.19	4	69.100	-67 56 56.29	0.10	4	69.100				18607
1629	- 3	262	8.4	F8	45 07.796	0.01	2	70.738	- 3 29 14.52	0.19	2	70.738				4018
1630	-29	583	7.7	G5	45 09.328	0.15	3	69.674	-28 56 00.02	0.21	3	69.674				4019
1631	-17	319	7.5	K5	45 13.709	0.05	2	70.781	-17 28 01.06	0.05	2	70.781				4020
1632	-52	218	8.07	K0	45 19.509	0.16	4	69.545	-52 03 01.16	0.16	4	69.545		2185		4021
1633	+16	203	5.73	A0	1 45 27.985	0.06	51	71.354	+16 42 25.80	0.06	51	71.354	1050	2188	370	31050
1634	-40	450	8.6	G5	45 38.601	0.08	4	69.932	-39 49 22.90	0.16	4	69.932				4022
1635	-41	492	9.3	G5	45 39.336	0.05	5	70.766	-41 29 07.62	0.16	4	70.766				207
1636	+ 1	322	8.6	F5	45 39.587	0.43	2	71.307	+ 2 27 46.33	0.23	2	71.307				4023
1637	- 9	342	8.7	K0	45 45.128	0.24	2	71.314	- 9 29 20.98	0.52	2	71.314				4024
1638	-48	474	9.3	K0	1 45 46.622	0.13	4	70.185	-48 36 47.63	0.07	4	70.185				208
1639	+ 2	270	6.00	G5	45 50.422	0.08	4	71.264	+ 3 26 12.36	0.21	4	71.264	2121	2196		4025
1640	-64	137	8.20	K5	46 00.426	0.10	4	68.818	-63 51 26.74	0.16	4	68.818		2199		4026
1641	-21	306	8.3	A5	46 02.593	0.13	4	69.248	-20 53 29.89	0.14	4	69.248				4027
1642	- 2	298	8.3	G0	46 06.019	0.08	2	71.325	- 1 46 46.54	0.17	2	71.325				4028
1643	-15	321	7.4	K0	1 46 11.122	0.20	3	71.731	-15 00 48.50	0.08	3	71.731				4029
1644	-37	691	9.1	G5	46 15.900	0.17	4	69.800	-37 06 02.77	0.12	4	69.800				4030
1645	-27	615	8.6	F0	46 17.452	0.11	4	69.076	-26 48 12.84	0.07	4	69.076				4031
1646	-57	359	8.2	K0	46 19.146	0.28	3	69.456	-56 38 21.11	0.18	3	69.456				4032
1647	-70	93	8.2	G5	46 19.303	0.04	4	69.622	-70 07 51.63	0.24	4	69.622				18608
1648	+ 0	294	7.8	A3	1 46 25.907	0.07	2	70.852	+ 1 05 00.14	0.04	2	70.852				4033
1649	-34	704	9.0	G5	46 31.165	0.09	4	70.015	-33 51 48.84	0.21	4	70.015				4034
1650	-43	556	9.1	G5	46 40.499	0.16	4	70.762	-43 29 02.17	0.20	4	70.762				209
1651	-18	310	8.5	F5	46 44.764	0.01	2	71.347	-18 14 32.07	0.09	2	71.347				4035
1652	-57	361	8.3	K0	46 52.845	0.07	4	69.979	-57 23 32.99	0.10	4	69.979				4036
1653	-11	351	6.76	G0	1 46 55.681	0.34	2	71.213	-10 57 03.00	0.05	2	71.213		2210		4037
1654	-64	138	8.0	G5	46 57.708	0.05	5	70.730	-64 36 03.47	0.07	5	70.730				18609
1655	-11	352	4.77	F0	47 07.440	0.03	73	71.547	-10 56 00.66	0.04	72	71.559	1051	2212	374	31051
1656	-35	638	9.1	K5	47 07.503	0.13	4	70.025	-35 32 50.78	0.08	4	70.025				4038
1657	-53	359	9.5	K0	47 09.168	0.06	4	69.293	-53 33 26.82	0.24	4	69.293				4039
1658	-44	532	7.9	K2	1 47 12.898	0.06	4	70.033	-44 29 21.71	0.08	4	70.033				210
1659	-53	360	9.1	K0	47 14.696	0.11	4	69.592	-53 15 33.95	0.23	4	69.592				4040
1660	-19	321	8.6	G0	47 19.609	0.01	2	70.768	-19 11 02.21	0.23	2	70.768				4041
1661	- 5	323	8.5	M2	47 23.487	0.17	2	71.783	- 5 06 26.06	0.14	2	71.783				4042
1662	-35	640	8.6	F5	47 25.189	0.18	4	70.221	-34 42 25.43	0.08	4	70.221				4043

1604 A 1394, 8.3m, 4°7, 31°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
1663	-6	345	8.5	G0	1 47 30.675	0.01	2	71.781	-6 25' 26.99	0.18	2	71.781				4044
1664	-7	306	8.7	A5	47 30.851	0.46	3	72.201	-6 57' 52.77	0.58	3	72.201				4045
1665	-14	339	8.4	G5	47 38.224	0.15	2	71.821	-13 57' 06.03	0.03	2	71.821				4046
1666	-29	602	7.42	K0	47 40.798	0.16	4	68.728	-29 17' 18.46	0.12	4	68.728	2220		377	4047
1667	-13	332	8.2	K0	47 40.933	0.02	2	71.751	-12 55' 37.12	0.14	2	71.751				4048
1668	-45	594	9.4	G5	1 47 41.315	0.17	3	69.769	-45 03' 02.88	0.13	3	69.769				211
1669	-4	282	8.0	K0	47 57.848	0.26	2	71.254	-3 56' 30.92	0.11	2	71.254				4049
1670	-23	678	8.4	K5	48 00.610	0.09	4	68.776	-23 00' 53.81	0.16	4	68.776				4050
1671	-2	306	8.2	K0	48 05.038	0.10	2	71.227	-2 18' 33.96	--	1	70.872				4051
1672	-1	252	8.7	G5	48 22.374	0.07	2	71.283	-0 32' 06.63	0.06	2	71.283				4052
1673	-43	566	7.60	K0	1 48 23.110	0.27	4	70.988	-42 45' 17.82	0.11	4	70.988	2235			212
1674	-59	150	7.40	K0	48 31.817	0.09	4	68.501	-59 11' 13.36	0.25	4	68.501	2240			4053
1675	-32	720	9.3	A5	48 37.768	0.24	4	70.292	-32 29' 31.22	0.10	4	70.292				4054
1676	-25	733	8.6	F2	48 51.815	0.05	3	68.870	-24 40' 31.43	0.03	3	68.870				4055
1677	-8	325	9.0	F8	48 51.984	0.15	2	71.333	-8 19' 23.62	0.03	2	71.333				4056
1678	-80	36	9.1	K5	1 48 52.800	0.13	3	69.225	-79 56' 14.62	0.11	3	69.225				18610
1678 SP					48 52.902	0.06	4	70.245	-79 56' 14.26	0.08	4	70.245				18610
1679	-4	285	7.3	A5	48 57.214	0.21	2	71.333	-4 27' 59.21	0.27	2	71.333				4057
1680	-50	514	6.05	A0	48 58.000	0.09	6	69.090	-50 27' 11.33	0.10	6	69.090	2123	2247	383	32123
1681	+1	340	8.7	K0	48 59.394	0.08	2	71.839	+2 08' 22.19	0.16	2	71.839				4058
1682	-11	359	3.92	K0	1 48 59.509	0.03	53	71.555	-10 34' 53.66	0.05	53	71.555	62	2249	384	30062
1683	-51	444	9.1	K0	48 59.987	0.19	4	69.298	-50 54' 40.17	0.08	4	69.298				213
1684	-62	146	8.9	K2	49 01.452	0.13	4	69.011	-62 19' 04.89	0.14	4	69.011				4059
1685	-16	320	8.6	K5	49 03.144	0.01	2	71.822	-15 42' 06.96	0.51	2	71.822				4060
1686	-3	268	7.11	F2	49 03.963	0.13	2	71.783	-2 53' 03.81	0.10	2	71.783	2252			4061
1687	-1	254	8.9	G5	1 49 05.535	0.00	2	71.851	-0 43' 51.94	0.10	2	71.851				4062
1688	-19	326	8.8	A0	49 05.936	0.07	2	71.340	-19 31' 14.45	0.09	2	71.340				4063
1689	-28	581	8.5	G5	49 23.563	0.16	3	69.408	-28 15' 57.45	0.10	3	69.408				4064
1690	-46	539	6.92	K0	49 24.372	0.22	4	69.858	-45 43' 04.03	0.12	4	69.858	2260			214
1691	-38	630	9.0	K5	49 27.190	0.13	4	70.441	-38 36' 10.26	0.08	4	70.441				4065
1692	-37	717	9.1	K5	1 49 31.431	0.11	5	70.168	-37 03' 05.87	0.10	4	70.040				4066
1693	-76	143	8.6	G5	49 31.875	0.16	4	69.963	-76 20' 17.85	0.23	4	69.963				18611
1693 SP					49 31.962	0.10	5	70.728	-76 20' 17.48	0.24	4	70.794				18611
1694	-31	775	8.8	K5	49 39.342	0.19	4	69.225	-31 34' 48.30	0.18	4	69.225				4067
1695	-41	511	8.7	K0	49 48.175	0.13	4	70.045	-40 53' 51.80	0.09	4	70.045				215
1696	-50	522	7.73	K2	1 49 52.248	0.09	5	69.990	-50 14' 28.90	0.24	4	70.071	2268			216
1697	-47	567	7.99	G5	50 01.231	0.08	4	70.487	-46 53' 15.50	0.02	4	70.487	2269			217
1698	-25	741	8.6	A3	50 01.517	0.07	4	68.962	-25 17' 28.65	0.23	4	68.962				4068
1699	+1	343	8.1	G5	50 03.170	0.16	2	71.734	+2 15' 07.66	0.24	2	71.734				4069
1700	+0	302	8.6	A5	50 03.434	0.28	2	71.862	+1 00' 40.38	0.12	2	71.862				4070
1701	-40	468	8.7	F5	1 50 04.603	0.21	4	70.524	-39 55' 13.70	0.12	3	70.385				218
1702	+3	257	8.0	G5	50 11.350	0.10	2	71.227	+4 25' 01.58	0.36	2	71.227				4071
1703	+28	312	3.58	F5	50 13.470	0.04	68	71.183	+29 20' 04.92	0.05	69	71.134	64	2272	387	80064
1704	-40	470	7.8	G5	50 13.658	0.09	4	70.535	-39 39' 44.60	0.21	4	70.535				4072
1705	-48	497	8.3	A2	50 15.259	0.16	4	70.508	-47 45' 28.93	0.07	4	70.508				219
1706	-13	340	7.8	K0	1 50 15.656	0.22	2	71.822	-12 58' 26.72	0.11	2	71.822	2273			4073
1707	-56	348	8.0	F5	50 18.403	0.05	4	69.258	-56 00' 23.03	0.08	4	69.258				4074
1708	-49	520	8.5	K0	50 22.530	0.13	3	70.732	-48 52' 02.38	0.16	3	70.732				220
1709	-81	36	7.52	K0	50 27.586	0.09	4	70.376	-81 36' 21.17	0.13	4	70.376	2282			18612
1709 SP					50 27.704	0.12	4	70.768	-81 36' 21.25	0.11	4	70.768	2282			18612
1710	-17	336	5.72	A3	1 50 27.864	0.09	6	70.371	-17 10' 29.24	0.11	6	70.271	2125	2283		32125
1711	-20	358	7.4	G0	50 27.893	0.24	2	71.783	-19 45' 07.80	0.05	2	71.783				4075
1712	-33	650	8.9	G0	50 29.924	0.16	4	70.576	-33 29' 10.67	0.20	4	70.576				4076
1713	-2	311	7.43	G0	50 33.595	0.13	4	71.576	-1 34' 12.52	0.10	4	71.576	2126	2286		4077
1714	-17	338	7.8	K0	50 36.676	0.04	2	71.844	-16 44' 06.27	0.20	2	71.844				4078
1715	-35	650	8.0	G5	1 50 36.921	0.08	4	70.516	-35 05' 55.23	0.11	4	70.516				4079
1716	-21	331	8.9	G0	50 41.644	0.19	4	69.010	-21 13' 02.66	0.09	4	69.010				4080
1717	-54	393	7.96	K2	50 54.306	0.07	4	69.797	-54 15' 26.87	0.16	4	69.797	2292			4081
1718	+2	290	4.84	K0	50 57.873	0.05	24	71.741	+2 56' 30.04	0.07	24	71.741	65	2293	391	30065
1719	-53	369	8.17	K2	51 08.071	0.15	4	69.959	-52 56' 15.02	0.14	4	69.959	2295			4082
1720	-79	46	8.6	K0	1 51 09.568	0.13	5	69.773	-78 46' 34.36	0.12	5	69.773				18613
1720 SP					51 09.570	0.14	4	69.735	-78 46' 34.06	0.10	4	69.735				18613
1721	-39	573	6.10	K0	51 14.292	0.15	6	70.740	-38 50' 25.80	0.15	6	70.740	2127	2297		32127
1722	-5	336	8.6	F2	51 20.360	0.11	2	71.301	-5 30' 44.45	0.45	2	71.301				4083
1723	-15	339	8.6	K2	51 20.797	0.28	2	71.296	-15 13' 19.55	0.39	2	71.296				4084
1724*	-0	290	9.0	G0	1 51 29.327	0.14	4	71.472	-0 04' 02.59	0.17	4	71.472				25311
1725	-62	150	8.5	K2	51 32.777	0.21	4	70.017	-61 55' 43.76	0.15	4	70.017				4085
1726	-30	655	8.8	G0	51 35.476	0.13	4	68.769	-30 32' 51.39	0.09	4	68.769				4086
1727	-46	552	4.41	M3	51 38.368	0.04	70	70.923	-46 32' 50.87	0.03	67	70.871	67	2303	393	30067
1728	+8	292	7.05	M0	51 43.560	0.08	6	71.106	+8 32' 08.87	0.17	6	71.106	2128	2308	394	32128
1729	-68	97	9.1	K0	1 51 46.173	0.13	4	70.060	-68 25' 59.33	0.09	4	70.060				18614
1730	+20	306	2.72	A5	51 52.474	0.17	2	68.632	+20 33' 50.18	0.08	2	68.632	66	2309	395	30066
1731	-8	339	8.7	G0	51 57.369	0.02	2	71.831	-7 37' 10.65	0.28	2	71.831				4087
1732	-11	367	8.4	K0	51 59.885	0.00	2	71.333	-11 16' 26.18	0.42	2	71.333				4088
1733	-6	360	8.1	G5	52 07.044	0.16	2	71.290	-6 31' 01.29	0.13	2	71.290				4089

1724 A 1512AB, 10.1m-10.2m, 1"2, 324°.

CATALOG OF 23,001 STARS FOR 1950.0

259

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
1734	-26°	688	8.3	K0	1 52 08.818	0.02	3	68.819	-26° 35' 23.68	0.02	3	68.819				4090
1735	+ 2	294	8.1	F2	52 12.520	0.10	2	71.281	+ 3 08 55.43	0.01	2	71.281				4091
1736	-43	583	5.00	B9	52 17.536	0.04	31	71.060	-42 44 30.76	0.05	31	71.060	1053	2315	397	31053
1737	-46	562	8.2	K0	52 19.366	0.23	4	70.772	-46 12 48.83	0.14	3	70.716				221
1738	-58	166	7.48	K2	52 25.761	0.05	4	70.769	-58 09 51.18	0.17	4	70.769		2316		4092
1739	- 0	294	8.9	K0	1 52 44.382	0.04	2	71.725	+ 0 21 51.10	0.23	2	71.725				4093
1740	-10	399	8.4	G5	52 44.665	0.09	2	71.247	-10 04 21.70	0.00	2	71.247				4094
1741	-72	125	8.5	G5	52 45.514	0.21	4	71.120	-72 29 49.06	0.28	4	71.120				18615
1742	-14	358	8.7	F8	52 53.201	0.04	2	71.240	-14 21 00.01	0.32	2	71.240				4095
1743	-70	100	7.9	K0	52 59.868	0.14	4	70.537	-69 45 42.92	0.03	4	70.537				18616
1744	+ 2	297	8.8	A5	1 53 00.606	0.00	2	71.318	+ 3 20 00.56	0.25	2	71.318				4096
1745	+22	284	5.95	K0	53 03.379	0.06	6	70.528	+23 19 58.74	0.10	6	70.528	2130	2323		32130
1746	- 9	356	8.7	G0	53 03.501	0.03	2	71.805	- 8 50 43.27	0.01	2	71.805				4097
1747	-36	732	8.9	M0	53 07.750	0.10	3	70.178	-36 02 51.68	0.15	3	70.178				4098
1748	- 4	302	8.7	G5	53 11.014	0.13	2	71.354	- 4 23 01.27	0.13	2	71.354				4099
1749	+ 1	348	9.0	A0	1 53 21.930	0.10	2	72.250	+ 1 53 29.34	0.32	2	72.250				4100
1750	- 3	283	9.0	G8	53 24.718	0.09	2	71.317	- 3 31 50.28	0.48	2	71.317				4101
1751	-21	339	7.8	F2	53 27.429	0.15	3	69.134	-20 48 23.49	0.13	3	69.134				4102
1752	-67	128	9.1	K2	53 29.659	0.12	4	70.253	-67 13 29.11	0.21	4	70.253				18617
1753	-23	715	8.6	K0	53 32.971	0.07	4	69.015	-22 49 18.72	0.11	4	69.015				4103
1754*	-22	321	8.5	F5	1 53 35.923	0.11	4	69.222	-22 04 10.19	0.05	4	69.222				4104
1755*	-44	565	8.9	G5	53 38.513	0.18	4	70.816	-44 05 41.88	0.07	4	70.816				222
1756	-68	101	4.72	K0	53 40.183	0.03	64	70.863	-67 53 32.99	0.04	63	70.865	69	2331	398	30069
1757	-43	592	9.3	F8	53 47.022	0.20	4	70.317	-43 17 28.83	0.06	4	70.317				223
1758	- 4	303	7.8	F0	53 48.032	0.16	2	71.287	- 4 25 17.85	0.10	2	71.287				4105
1759	-19	341	8.4	F2	1 53 51.822	0.06	2	71.766	-18 51 41.74	0.06	2	71.766				4106
1760	-38	653	8.1	K5	53 54.164	0.18	4	70.652	-38 03 47.17	0.26	4	70.652				4107
1761	-48	510	9.1	K0	53 54.384	0.12	4	70.665	-48 04 19.87	0.12	4	70.665				224
1762	-24	819	8.2	K2	53 59.394	0.14	4	69.087	-24 28 39.49	0.11	4	69.087				4108
1763	-66	119	8.4	G0	54 02.117	0.12	4	69.290	-65 56 05.10	0.18	4	69.290				18618
1764	-52	241	3.73	G5	1 54 02.344	0.03	68	71.315	-51 51 19.33	0.04	67	71.320	68	2339	399	30068
1765	-33	666	8.7	K0	54 05.174	0.09	4	70.252	-32 43 46.12	0.11	4	70.252				4109
1766	+ 0	313	8.8	G0	54 05.954	0.08	2	71.254	+ 1 23 34.66	0.03	2	71.254				4110
1767	-34	744	7.8	K0	54 09.979	0.15	4	70.501	-33 58 30.80	0.20	3	70.354				4111
1768	-77	75	8.3	K0	54 12.166	0.12	4	69.807	-77 29 11.32	0.06	4	69.807				18619
1768 SP					1 54 12.014	0.34	4	69.734	-77 29 11.16	0.30	4	69.734				18619
1769	-74	146	8.9	K2	54 18.022	0.14	4	70.272	-73 39 13.82	0.14	4	70.272				18620
1770	-23	721	5.18	K5	54 19.772	0.10	6	70.098	-22 46 13.45	0.12	6	70.098	2131	2343		32131
1771	-28	609	8.0	K0	54 20.528	0.06	4	69.526	-27 48 28.20	0.06	4	69.526				4112
1772	-45	632	8.5	F5	54 34.200	0.13	4	70.023	-45 03 49.77	0.20	4	70.023				225
1773	+17	289	5.16	G5	1 54 36.894	0.10	6	70.956	+17 34 26.85	0.25	6	70.956	2132	2347		32132
1774	- 2	325	8.5	K0	54 39.172	0.07	2	71.734	- 1 57 33.28	0.11	2	71.734				4113
1775	-54	396	8.5	K0	54 40.153	0.04	4	69.805	-54 29 43.14	0.16	4	69.805				4114
1776	-26	704	7.44	K0	54 41.712	0.17	3	69.543	-25 51 49.86	0.03	3	69.543			2350	4115
1777	-51	473	9.5	F8	54 48.440	0.23	4	69.478	-50 42 54.01	0.27	4	69.478				226
1778	-17	357	9.0	K5	1 54 51.212	0.19	2	70.795	-16 40 02.80	0.31	2	70.795				4116
1779	-18	336	7.6	K5	54 52.715	0.22	2	71.268	-17 55 13.27	0.04	2	71.268				4117
1780	-31	800	7.31	K0	54 54.068	0.16	4	69.960	-31 19 39.44	0.14	4	69.960			2360	4118
1781	-27	675	7.7	K0	54 55.893	0.22	4	70.027	-26 53 19.49	0.07	4	70.027				4119
1782	-59	168	7.66	F5	54 56.384	0.11	4	69.588	-58 42 54.73	0.12	4	69.588			2361	4120
1783	-49	539	8.4	K0	1 55 01.220	0.13	4	70.608	-49 29 22.74	0.18	4	70.608				227
1784	-38	660	7.8	K0	55 07.332	0.13	4	70.229	-37 44 23.64	0.21	4	70.229				4121
1785	-57	380	8.7	K2	55 24.391	0.09	4	70.583	-57 11 22.80	0.27	4	70.583				4122
1786	- 2	330	6.57	A0	55 26.829	0.14	3	70.720	- 2 18 09.30	0.12	2	70.739			2375	4123
1787	-22	325	8.4	G5	55 28.159	0.12	4	69.790	-22 08 39.23	0.15	4	69.790				4124
1788	- 6	373	9.0	F5	1 55 37.476	0.11	2	70.811	- 6 16 44.96	0.03	2	70.811				4125
1789	-15	352	8.2	G0	55 39.474	0.05	2	71.229	-15 00 54.76	0.19	2	71.229				4126
1790	-35	683	9.0	F8	55 45.332	0.13	4	69.983	-35 21 11.07	0.17	4	69.983				4127
1791	-11	380	8.5	G5	55 47.602	0.14	2	70.831	-10 56 14.80	0.12	2	70.831				4128
1792	-78	42	6.22	F2	55 54.362	0.06	6	69.736	-78 35 33.66	0.12	6	69.736	2134	2377	405	32134
1792 SP					1 55 54.419	0.06	6	68.782	-78 35 33.48	0.20	6	68.782	2134	2377	405	52134
1793	- 8	354	8.4	G5	55 59.879	0.04	2	71.262	- 7 51 33.87	0.22	2	71.262				4129
1794	-39	597	8.4	K0	56 01.165	0.06	4	69.971	-39 35 02.29	0.17	4	69.971				4130
1795	-59	172	8.6	K2	56 08.373	0.09	4	69.551	-59 35 27.40	0.09	4	69.551				4131
1796	-33	682	6.34	G5	56 14.317	0.12	6	69.487	-33 18 33.61	0.14	6	69.487	2135	2384	407	32135
1797	-37	756	9.2	K2	1 56 17.818	0.20	4	70.009	-37 03 27.45	0.34	4	70.009				4132
1798	-71	88	8.8	K0	56 21.742	0.19	4	69.577	-71 22 07.48	0.11	4	69.577				18621
1799	-75	140	7.47	K0	56 25.688	0.11	4	69.557	-75 36 33.01	0.15	4	69.557		2388		18622
1799 SP					56 25.732	0.22	4	70.314	-75 36 32.64	0.09	4	70.314		2388		18622
1800	-48	525	10.1	G0	56 28.556	0.17	4	70.450	-48 00 34.96	0.13	4	70.450				228
1801	-21	352	7.3	F5	1 56 33.448	0.05	3	69.709	-21 22 32.87	0.06	3	69.709				4133
1802	- 5	361	8.5	F5	56 34.477	0.00	2	71.280	- 4 56 29.18	0.27	2	71.280				4134
1803	- 9	372	8.6	K0	56 36.048	0.07	2	71.302	- 9 13 27.35	0.08	2	71.302				4135
1804	- 0	301	8.2	A3	56 36.298	0.17	2	70.855	+ 0 15 52.17	0.18	2	70.855				4136
1805	-56	360	8.7	K2	56 38.943	0.16	4	68.993	-55 40 28.89	0.12	4	68.993				4137

1754 8.5m-10.0m, 0°4, 71°.

1755 9.8m-10.3m, 0°4, 285°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
1806	-18	345	8.3	K0	1 56 40.306	0.11	2	71.339	-18 18' 10.59"	0.11	2	71.339	2136	2395	408	4138
1807	+11	261	6.14	A2	56 45.006	0.09	6	70.339	+12 03 10.57	0.12	6	70.339				32136
1808	-12	368	8.3	A2	56 50.986	0.00	2	71.780	-12 08 21.49	0.26	2	71.780				4139
1809	-43	606	7.37	K2	56 53.612	0.11	4	70.423	-43 11 29.62	0.17	4	70.423			2399	229
1810	-0	302	8.7	G0	56 54.260	0.27	2	71.352	-0 29 39.82	0.17	2	71.352			2400	4140
1811	-24	839	8.2	K5	1 56 59.286	0.14	4	69.954	-24 13 19.35	0.04	4	69.954				4141
1812*	-7	337	8.8	F8	57 03.648	0.58	2	71.806	-6 37 28.65	0.35	2	71.806				4142
1813	-14	371	7.06	M0	57 05.470	0.09	2	71.820	-14 06 52.85	0.11	2	71.820			2403	4143
1814	-52	249	7.8	K0	57 11.650	0.11	5	70.124	-52 29 21.99	0.13	5	70.124				4144
1815	-62	162	3.02	F0	57 12.454	0.03	74	71.339	-61 48 44.93	0.03	74	71.339	72	2405	409	30072
1816	-45	649	8.2	F5	1 57 18.245	0.17	4	70.057	-44 59 04.34	0.10	4	70.057				230
1817	-33	690	9.1	G5	57 21.025	0.08	4	70.444	-33 20 15.88	0.25	4	70.444				4145
1818	-20	378	8.8	K0	57 21.950	0.12	4	70.212	-20 27 00.17	0.11	4	70.212				4146
1819	-54	404	9.5	K2	57 22.424	0.09	4	69.502	-54 05 03.64	0.20	4	69.502				4147
1820	-74	150	8.2	K0	57 23.928	0.09	4	69.585	-74 21 00.65	0.23	4	69.585				18623
1821	-7	339	8.3	K0	1 57 25.732	0.08	2	71.825	-7 15 30.56	0.01	2	71.825				4148
1822	-35	694	9.0	K2	57 30.101	0.18	4	70.247	-35 00 03.99	0.11	4	70.247				4149
1823	-4	311	7.7	K0	57 37.136	0.10	2	71.381	-4 31 31.98	0.10	2	71.381				4150
1824	-46	588	8.3	K2	57 38.279	0.19	4	70.461	-46 30 17.83	0.15	4	70.461				231
1825	-21	358	4.18	M0	57 39.122	0.03	84	71.202	-21 19 10.08	0.03	83	71.209	71	2419	412	30071
1826	-4	312	6.89	A0	1 57 43.141	0.03	2	71.238	-3 36 35.57	0.20	2	71.238			2420	4151
1827	-38	673	9.3	K2	57 45.285	0.11	4	70.558	-38 22 03.40	0.16	4	70.558				4152
1828	-29	676	8.4	F0	57 45.490	0.05	4	70.049	-29 18 07.92	0.06	4	70.049				4153
1829	+3	273	7.12	G5	57 45.550	0.07	2	71.255	+4 08 51.86	0.43	2	71.255			2423	4154
1830	-32	772	8.4	G0	57 46.712	0.09	4	70.015	-31 59 30.70	0.11	4	70.015				4155
1831*	-51	488	8.9	G5	1 57 56.114	0.09	4	69.840	-50 48 30.68	0.09	4	69.840				232
1832	-30	693	8.5	A2	57 57.490	0.10	4	70.717	-30 06 28.11	0.18	4	70.717				4156
1833	-70	110	9.2	F5	58 20.265	0.12	4	70.468	-70 17 49.27	0.12	4	70.468				18624
1834	-9	382	7.14	G5	58 20.558	0.02	2	71.321	-9 42 45.48	0.04	2	71.321			2432	4157
1835	-65	158	8.5	K2	58 22.182	0.12	4	70.046	-65 01 46.83	0.05	4	70.046				18625
1836	-66	125	6.14	K2	1 58 22.352	0.16	6	70.137	-66 18 30.19	0.11	6	70.137	2137	2433	414	32137
1837	-40	514	8.2	G5	58 28.493	0.05	3	70.184	-40 30 33.58	0.09	3	70.184				233
1838	-3	300	7.9	G0	58 31.926	0.13	2	71.294	-2 44 12.80	0.18	2	71.294			415	4158
1839	-40	515	8.8	G5	58 32.190	0.14	4	70.302	-39 54 22.05	0.05	3	70.089				234
1840	-35	702	9.1	K0	58 36.229	0.16	4	70.520	-34 39 43.94	0.29	4	70.520				4159
1841	-11	386	7.68	F8	1 58 38.210	0.08	2	71.326	-11 17 27.58	0.03	2	71.326			416	4160
1842	-36	762	9.1	G0	58 45.172	0.10	4	70.299	-35 53 54.29	0.11	4	70.299				4161
1843	-1	276	8.5	K0	58 48.196	0.08	2	71.290	-1 07 34.02	0.41	2	71.290				4162
1844	-63	141	9.1	K0	58 48.782	0.18	4	70.051	-62 39 42.57	0.21	4	70.051				4163
1845	-28	634	8.3	G5	58 49.716	0.10	3	69.809	-27 50 59.65	0.09	3	69.809				4164
1846*	-44	587	8.01	F8	1 58 51.350	0.13	4	70.601	-44 04 18.82	0.15	4	70.601			2441	235
1847	-60	173	9.3	K0	58 59.823	0.14	4	70.216	-60 26 16.82	0.35	4	70.216				4165
1848	-63	143	7.83	F2	59 01.262	0.14	4	69.985	-63 00 14.70	0.06	4	69.985			2444	4166
1849	+0	335	8.5	F5	59 04.824	0.09	2	70.787	+1 06 08.26	0.23	2	70.787				4167
1850	-85	24	7.17	K2	59 13.195	0.16	4	70.546	-84 59 38.32	0.19	4	70.546			2448	18626
1850 SP					1 59 12.957	0.22	4	69.732	-84 59 37.71	0.35	4	69.732			2448	18626
1851	-64	146	9.4	K5	59 16.763	0.09	4	70.550	-63 38 55.65	0.17	4	70.550				4168
1852	-3	301	8.5	F8	59 32.093	0.40	2	70.807	-2 49 24.17	0.12	2	70.807				4169
1853	-17	371	7.80	K2	59 32.868	0.26	2	71.311	-16 48 33.80	0.07	2	71.311			2454	4170
1854	-22	339	8.5	K0	59 40.941	0.13	4	70.270	-21 58 09.02	0.06	4	70.270				4171
1855	-45	659	4.96	K0	1 59 42.080	0.07	6	69.375	-44 57 13.54	0.14	6	69.375	2138	2455	422	32138
1856	-67	136	9.2	K0	59 46.347	0.24	5	70.146	-67 26 36.97	0.26	5	70.146				18627
1857	-24	867	8.5	F8	59 52.433	0.14	4	70.566	-24 16 50.19	0.08	4	70.566				4172
1858	-66	126	7.5	M1	59 55.343	0.15	4	70.239	-66 35 23.15	0.14	4	70.239				18628
1859*	-82	37	8.42	G5	59 57.120	0.19	4	69.829	-82 32 08.92	0.16	4	69.829			2457	18629
1859 SP					1 59 57.170	0.25	4	69.870	-82 32 09.08	0.34	4	69.870			2457	18629
1860	-50	572	8.1	G5	2 00 01.633	0.08	4	70.784	-50 22 04.81	0.08	3	70.754				236
1861	-61	171	8.98	K5	00 04.310	0.23	5	70.764	-61 07 03.99	0.12	5	70.764			2460	4173
1862	+3	277	8.8	K5	00 05.441	0.01	2	71.818	+3 36 25.23	0.31	2	71.818				4174
1863	-13	369	8.5	K2	00 08.129	0.26	2	71.343	-13 22 54.54	0.07	2	71.343				4175
1864	-46	597	7.74	F5	2 00 11.662	0.10	4	70.160	-46 04 33.52	0.08	4	70.160			2461	237
1865	+1	362	7.7	G5	00 11.841	0.01	2	71.807	+1 41 52.70	0.05	2	71.807				4176
1866	-58	182	9.0	F8	00 13.930	0.07	4	70.861	-57 55 40.02	0.20	4	70.861				4177
1867	-27	713	7.6	K0	00 18.684	0.16	4	70.241	-26 58 54.22	0.09	4	70.241				4178
1868	+2	322	8.3	K0	00 25.348	0.22	2	71.844	+2 31 20.64	0.21	2	71.844				4179
1869	+2	321	7.09	G0	2 00 25.644	0.22	2	71.844	+3 07 02.96	0.34	2	71.844			2468	4180
1870	-41	567	8.02	F5	00 25.686	0.19	4	70.093	-40 45 37.71	0.09	4	70.093			2469	238
1871	-74	154	8.9	K0	00 30.585	0.05	4	70.611	-73 59 41.76	0.05	4	70.611				18630
1872	-30	717	8.8	G5	00 32.218	0.13	4	71.053	-30 34 19.60	0.18	4	71.053				4181
1873	-24	872	6.51	K0	00 33.132	0.10	5	70.506	-24 07 35.25	0.13	5	70.506	2140	2470	424	32140
1874	-16	356	5.91	G5	2 00 34.096	0.11	6	70.607	-15 32 45.75	0.08	6	70.607	2141	2471		32141
1875	-56	365	8.28	K0	00 37.138	0.21	4	70.587	-56 29 09.76	0.11	4	70.587			2473	4182
1876	-0	307	5.56	A5	00 37.745	0.12	6	71.635	-0 06 41.92	0.13	6	71.635	2142	2474	425	32142
1877	-42	699	8.1	K0	00 42.694	0.09	4	70.333	-41 52 29.82	0.11	3	70.131				239
1878	-63	144	8.1	F8	00 43.556	0.16	4	71.618	-62 49 58.18	0.18	4	71.618				4183

1812 9.5m-9.5m, 0°2.
1831 9.3m-9.7m, 0°3, 258°.

1846 SDS, 8.4m-9.4m, 0°1, 144°.
1859 SDS, 8.8m-9.7m, 1°9, 42°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
1879	-25	803	8.6	A3	2 00 52.960	0.10	3	70.160	-25 01 37.68	0.18	3	70.160				4184
1880	-5	381	7.70	G5	00 54.754	0.07	2	72.347	-4 34 10.87	0.26	2	72.347		2481		4185
1881	-60	176	8.9	K0	00 57.643	0.19	2	69.839	-60 05 00.59	0.01	2	69.839				4186
1882	-25	805	8.4	K5	01 07.202	0.06	4	70.404	-25 22 02.07	0.09	4	70.404				4187
1883	-10	424	7.3	G5	01 07.205	0.58	2	72.375	-9 42 00.77	0.00	2	72.375				4188
1884	-4	324	5.92	K0	2 01 09.224	0.17	5	72.081	-4 20 33.75	0.18	5	72.081	2143	2485		32143
1885	-50	578	8.2	G5	01 09.432	0.10	4	70.782	-49 43 53.51	0.07	4	70.782				240
1886	-75	144	7.04	M3	01 21.027	0.11	6	70.804	-74 41 09.16	0.05	6	70.804	2144	2490		32144
1886	SP				01 21.048	0.09	23	71.369	-74 41 08.93	0.16	22	71.454	2144	2490		52144
1887	-66	127	8.01	K2	01 24.476	0.12	2	69.826	-66 07 27.04	0.22	2	69.826		2491		18631
1888	-64	151	8.4	K0	2 01 44.087	0.18	4	70.592	-64 28 27.35	0.16	4	70.592				18632
1889	-6	397	8.0	K0	01 44.356	0.09	2	71.440	-5 57 01.14	0.19	2	71.440				4192
1890	-33	714	7.9	G5	01 48.177	0.15	4	71.032	-32 45 28.17	0.06	4	71.032				4193
1891	-71	99	9.1	G5	01 51.834	0.09	4	71.314	-71 06 11.98	0.31	3	71.460				18633
1892	-20	393	8.3	G0	01 56.853	0.07	2	72.226	-19 36 25.33	0.33	2	72.226				4194
1893	-44	600	8.6	G0	2 01 59.209	0.15	4	71.057	-44 14 23.41	0.18	4	71.057				241
1894	-14	386	8.3	F8	02 05.919	0.39	3	72.220	-14 03 08.65	0.11	3	72.220				4195
1895	-29	706	4.74	A0p	02 14.973	0.03	56	71.205	-29 32 09.46	0.05	56	71.205	1055	2506	428	81055
1896	-42	707	9.5	F8	02 22.792	0.10	4	71.235	-42 18 24.73	0.12	4	71.235				242
1897	-83	35	7.89	A5	02 24.789	0.02	202	70.744	-82 44 55.62	0.03	201	70.735	3974	2508		63974
1897	SP				2 02 24.781	0.02	185	70.967	-82 44 55.56	0.04	179	70.940	3974	2508		73974
1898	-51	507	9.4	K0	02 26.811	0.16	4	70.562	-51 23 32.09	0.24	4	70.562				243
1899	-33	718	8.7	G5	02 30.389	0.05	4	70.999	-33 19 22.02	0.10	4	70.999				4196
1900	-2	357	8.3	K0	02 31.157	0.01	2	71.820	-2 16 37.93	0.06	2	71.820				4197
1901	-35	724	7.5	K0	02 31.799	0.09	4	70.855	-35 30 44.11	0.06	4	70.855				4198
1902	-16	365	8.0	G0	2 02 35.237	0.27	3	72.081	-15 54 59.23	0.36	3	72.081				4199
1903	-28	653	7.7	K0	02 40.105	0.15	4	70.009	-28 35 50.94	0.13	4	70.009				4200
1904	-54	415	9.1	K0	02 44.436	0.12	4	70.252	-53 53 30.47	0.13	4	70.252				4201
1905	-0	315	8.5	G0	02 45.233	0.08	2	71.268	+ 0 05 04.21	0.07	2	71.268				4202
1906	-49	575	8.9	G5	02 50.993	0.15	4	70.351	-49 06 06.36	0.16	4	70.351				244
1907	-9	399	8.7	G5	2 02 58.979	0.41	2	71.296	-9 02 54.59	0.22	2	71.296				4203
1908	-36	783	9.3	K5	03 05.322	0.07	4	70.568	-36 03 27.18	0.19	4	70.568				4204
1909	-56	375	9.1	G0	03 10.436	0.14	4	70.035	-56 24 29.39	0.19	4	70.035				4205
1910	-40	537	8.9	G5	03 19.466	0.07	4	70.577	-40 31 34.53	0.19	4	70.577				245
1911	-14	391	8.8	F5	03 19.688	0.11	2	71.303	-14 22 19.94	0.30	2	71.303				4206
1912	-49	577	7.9	K2	2 03 34.811	0.10	4	70.293	-48 43 44.42	0.18	4	70.293				246
1913	-22	351	8.4	K0	03 38.941	0.10	4	69.737	-21 59 38.34	0.19	4	69.737				4207
1914	-41	581	8.6	F5	03 39.764	0.16	4	70.122	-41 25 08.42	0.08	4	70.122				247
1915	-54	416	9.2	K2	03 44.393	0.16	4	70.278	-54 29 36.65	0.15	4	70.278				4208
1916	-52	263	7.65	F2	03 46.013	0.16	4	69.488	-52 13 46.67	0.13	4	69.488		2528		4209
1917	-68	113	8.1	K0	2 03 54.943	0.14	4	69.827	-68 32 22.08	0.03	3	69.477				18634
1918	-10	431	8.5	K2	03 58.542	0.16	2	70.777	-10 13 42.69	0.09	2	70.777				4210
1919	-38	701	8.8	F5	04 03.913	0.10	4	70.186	-38 03 00.52	0.08	4	70.186				4211
1920	+2	332	8.8	K0	04 04.004	0.01	2	71.277	+ 2 51 50.17	0.52	2	71.277				4212
1921	-40	544	7.28	M0	04 09.375	0.12	4	69.864	-39 46 36.42	0.05	4	69.864		2537	430	4213
1922	-15	367	8.2	G0	2 04 10.013	0.21	2	71.260	-14 42 04.66	0.52	2	71.260				4214
1923	+3	284	8.5	M0	04 10.524	0.04	2	71.246	+ 3 39 58.83	0.15	2	71.246				4215
1924	-24	895	7.9	K0	04 11.992	0.12	3	69.101	-23 48 15.95	0.18	3	69.101				4216
1925	+0	352	7.8	K0	04 13.717	0.01	2	70.850	+ 1 12 15.05	0.58	2	70.850				4217
1926	+22	306	2.23	K2	04 21.211	0.05	34	70.697	+23 13 34.02	0.06	34	70.697	74	2538	431	30074
1927	-2	362	7.9	G5	2 04 23.509	0.13	2	71.283	-2 03 40.23	0.33	2	71.283				4218
1928	-34	799	9.5	G5	04 23.837	0.11	4	70.010	-34 26 35.11	0.14	4	70.010				4219
1929	-37	802	7.48	K0	04 29.768	0.14	4	69.835	-37 21 22.49	0.20	4	69.835		2540		4220
1930	-4	338	7.5	F0	04 30.860	0.16	2	71.258	-4 27 18.01	0.42	2	71.258				4221
1931	-9	403	6.79	G5	04 34.018	0.03	2	71.235	-8 50 37.09	0.11	2	71.235		2542	432	4222
1932	-31	848	9.0	G5	2 04 36.850	0.12	3	69.339	-31 17 59.30	0.08	3	69.339				4223
1933	-7	361	8.8	F0	04 43.367	0.25	2	71.205	-7 27 46.50	0.26	2	71.205				4224
1934	-47	633	9.2	G0	04 44.502	0.10	3	69.804	-46 50 43.06	0.05	3	69.804				248
1935	-12	393	8.3	G5	04 45.811	0.18	2	71.254	-11 55 11.13	0.03	2	71.254				4225
1936	-55	390	8.8	K0	04 48.732	0.13	4	69.039	-55 09 50.86	0.11	4	69.039				4226
1937	-71	106	9.3	G0	2 04 53.181	0.16	4	69.114	-70 52 08.40	0.22	4	69.114				18635
1938	-70	124	9.3	G5	04 57.066	0.12	4	69.601	-69 57 24.39	0.18	4	69.601				18636
1939	-50	605	9.5	K5	05 04.313	0.20	4	68.862	-50 13 03.09	0.11	4	68.862				249
1940	-32	800	9.0	K0	05 08.223	0.09	4	69.999	-32 33 39.52	0.09	4	69.999				4227
1941	-34	805	9.1	F5	05 30.095	0.11	4	69.966	-33 41 29.36	0.20	4	69.966				4228
1942	-14	398	8.6	K0	2 05 33.599	0.03	2	70.807	-14 29 17.01	--	1	70.740				4229
1943	-22	363	8.2	F5	05 39.816	0.13	4	68.830	-21 35 04.42	0.15	4	68.830				4230
1944	-10	437	6.87	A3	05 52.211	0.09	2	70.444	-10 16 40.94	0.25	2	70.444				4231
1945	-28	675	7.22	A5	05 53.193	0.09	4	69.766	-27 48 29.26	0.11	4	69.766		2560	435	4232
1946	-1	296	8.0	K2	05 53.819	0.03	2	70.801	-0 39 21.95	0.01	2	70.801		2561		4233
1947	-7	365	8.4	M0	2 05 56.854	0.04	2	70.743	-6 42 21.54	0.12	2	70.743				4234
1948	+1	375	8.8	G5	06 02.365	0.01	2	71.268	+ 1 41 35.43	0.24	2	71.268				4235
1949	-57	403	7.7	K0	06 04.874	0.10	4	69.028	-57 25 51.88	0.14	4	69.028				4236
1950	-3	320	8.5	K5	06 17.063	0.02	2	71.251	-3 26 31.40	0.00	2	71.251				4237
1951	-18	372	7.6	K5	06 22.254	0.07	2	71.276	-17 37 39.63	0.13	2	71.276				4238

1929 7.5m-11.5m, 1°4, 350°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
1952	-26°	767	8.5	A0	2 06 23.046	0.04	3	69.739	-25° 58' 39.19"	0.27	3	69.739				4239
1953	-46	624	9.3	G5	06 26.355	0.13	5	70.154	-46 36 33.92	0.13	4	70.021				250
1954	-16	379	8.1	F0	06 31.752	0.05	2	71.246	-16 14 45.61	0.26	2	71.246				4240
1955	-43	651	8.9	G5	06 38.231	0.04	4	70.003	-43 30 13.44	0.10	4	70.003				251
1956	-36	807	7.78	K0	06 40.862	0.21	4	69.858	-36 03 34.53	0.12	4	69.858		2576		4241
1957	-45	689	8.5	K0	2 06 42.765	0.15	4	69.999	-44 43 41.90	0.04	4	69.999				252
1958	-24	917	8.5	K0	06 44.134	0.06	4	69.809	-24 36 03.18	0.12	4	69.809				4242
1959	-23	799	7.62	K2	06 46.079	0.03	4	69.962	-23 13 34.66	0.18	4	69.962		2582	441	4243
1960	-65	167	8.7	K5	06 49.732	0.02	4	69.124	-65 13 50.60	0.18	4	69.124				18637
1961	-20	404	7.5	K0	06 55.898	0.11	2	71.279	-19 48 22.01	0.25	2	71.279				4244
1962*	-75	149	8.6	K0	2 07 13.416	0.11	4	69.523	-74 47 54.34	0.01	4	69.523				18638
1963	+ 3	289	6.91	A2	07 15.315	0.03	2	70.862	+ 3 32 00.73	0.48	2	70.862		2588		4245
1964	-24	921	6.51	F0	07 17.270	0.10	6	69.390	-24 34 52.56	0.07	6	69.390	2147	2589		32147
1965	-15	377	7.7	K0	07 22.392	0.43	2	70.817	-15 07 12.84	-	1	70.760				4246
1966	-29	752	7.4	K2	07 28.916	0.05	4	69.293	-29 14 33.52	0.18	4	69.293				4247
1967	-78	45	9.18	K0	2 07 38.382	0.06	4	69.220	-78 09 27.36	0.15	4	69.220		2597		18639
1967 SP					07 38.388	0.06	4	69.304	-78 09 27.40	0.16	4	69.304		2597		18639
1968	- 0	326	8.2	G5	07 38.675	0.02	2	70.859	+ 0 15 32.03	0.00	2	70.859				4248
1969	- 9	414	8.0	K0	07 47.166	0.09	2	71.318	- 8 58 32.11	0.07	2	71.318				4249
1970	-53	400	8.0	G5	07 50.921	0.13	4	69.061	-53 30 42.99	0.09	4	69.061				4250
1971	-30	755	8.8	F5	2 07 50.989	0.09	4	69.980	-30 13 53.15	0.13	4	69.980				4251
1972	+18	277	5.92	M0	07 51.102	0.02	142	71.033	+19 15 55.07	0.03	141	71.021	1056	2601	444	81056
1973	- 7	372	8.9	K0	07 54.306	0.34	2	71.225	- 7 14 09.58	0.45	2	71.225				4252
1974	-37	819	8.5	F2	07 57.961	0.13	4	70.051	-37 36 57.45	0.11	4	70.051				4253
1975	-12	403	8.7	G0	08 08.405	0.29	2	71.277	-11 49 35.73	0.22	2	71.277				4254
1976	-20	408	8.6	G0	2 08 14.512	0.32	2	70.238	-20 25 49.75	0.19	2	70.238				4255
1977	-46	641	8.9	K0	08 19.840	0.06	5	70.321	-45 51 40.66	0.11	5	70.321				253
1978	-13	400	7.30	A0	08 20.125	0.20	2	71.247	-13 09 42.06	0.19	2	71.247		2608	445	4256
1979	-36	813	7.64	K0	08 27.223	0.10	4	70.314	-35 44 43.04	0.06	4	70.314		2612		4257
1980	-38	725	7.70	K2	08 34.739	0.20	4	70.309	-38 36 07.40	0.10	3	70.099		2616		4258
1981	-56	386	9.2	G0	2 08 40.339	0.05	4	69.576	-56 07 31.39	0.09	4	69.576				4259
1982	-49	602	8.6	G5	08 42.058	0.16	4	70.335	-49 07 29.65	0.23	4	70.335				254
1983	-39	640	8.8	K2	08 46.312	0.10	4	70.281	-39 22 18.62	0.18	4	70.281				4260
1984	-61	188	7.86	K2	08 46.807	0.06	4	68.870	-61 19 55.82	0.04	4	68.870		2621		4261
1985	-19	402	7.4	K0	08 47.393	0.09	2	71.238	-19 32 31.87	0.11	2	71.238				4262
1986	- 6	420	8.7	F8	2 08 48.837	0.12	2	71.324	- 5 52 37.29	0.16	2	71.324				4263
1987	-10	447	6.09	F2	08 54.967	0.13	6	69.137	-10 17 07.45	0.15	6	69.137	2150	2623		32150
1988	-44	642	9.1	G5	08 55.944	0.29	4	70.795	-44 02 30.96	0.19	4	70.795				255
1989	-77	93	8.9	M2	08 56.558	0.34	5	70.381	-76 51 23.34	0.17	5	70.381				18640
1989 SP					08 56.591	0.16	4	70.260	-76 51 23.49	0.17	4	70.260				18640
1990	- 2	375	6.04	K0	2 09 03.319	0.06	6	69.963	- 2 03 34.96	0.07	6	69.963	2151	2624		32151
1991	- 0	329	8.7	K0	09 10.281	0.12	2	71.288	- 0 00 39.12	0.21	2	71.288				4264
1992	- 6	421	8.6	F0	09 11.653	0.20	2	71.350	- 6 22 08.38	0.14	2	71.350				4265
1993	-73	145	8.4	G5	09 20.045	0.13	4	69.581	-72 43 49.14	0.06	4	69.581				18641
1994	-60	186	8.8	K5	09 20.586	0.19	4	69.119	-59 42 44.37	0.21	4	69.119				4266
1995	- 5	404	8.7	G2	2 09 22.345	0.14	2	71.868	- 5 35 54.37	0.12	2	71.868				4267
1996	-34	824	8.5	K0	09 22.548	0.10	4	71.006	-34 10 41.86	0.13	4	71.006				4268
1997	-13	405	8.6	A3	09 23.656	0.30	2	71.811	-13 08 28.96	0.05	2	71.811				4269
1998	-31	877	9.0	K0	09 31.445	0.16	4	69.574	-31 37 58.98	0.08	4	69.574				4270
1999	-42	746	9.5	F8	09 34.641	0.27	4	70.514	-42 06 14.70	0.19	4	70.514				256
2000p	-49	604	8.07	F0	2 09 37.182	0.20	4	70.574	-49 33 57.87	0.24	4	70.574		2635		257
2001	+ 2	347	6.69	G5	09 40.321	0.03	2	71.347	+ 2 30 41.04	0.06	2	71.347		2636		4271
2002	-58	199	9.0	K5	09 43.949	0.14	4	69.071	-58 15 06.93	0.16	3	68.470				4272
2003	-22	376	8.7	K0	09 45.556	0.16	4	69.819	-21 47 30.05	0.21	4	69.819				4273
2004	-28	698	7.4	K0	09 55.894	0.12	4	69.211	-27 44 47.44	0.12	4	69.211				4274
2005	-47	664	6.95	K0	2 09 59.732	0.07	6	69.904	-47 24 15.39	0.10	6	69.904	2152	2642		32152
2006	-33	746	9.3	K0	10 04.318	0.08	4	70.161	-33 05 10.61	0.10	4	70.161				4275
2007	-17	415	8.4	K0	10 08.113	0.17	2	71.306	-16 37 30.63	0.15	2	71.306				4276
2008	- 2	379	7.9	K0	10 09.301	0.10	2	70.460	- 2 27 42.63	0.51	2	70.460				4277
2009	-26	795	7.7	G5	10 18.783	0.22	4	69.841	-26 33 22.14	0.17	4	69.841				4278
2010	+14	357	5.99	K5	2 10 19.532	0.11	11	71.836	+15 02 46.77	0.09	11	71.836	1057	2655	452	31057
2011	+ 8	345	4.54	G5	10 20.717	0.03	64	71.616	+ 8 36 47.15	0.05	64	71.616	1058	2656	453	31058
2012	-77	95	6.66	F0	10 22.164	0.08	6	70.618	-76 51 30.34	0.19	6	70.618	2154	2657	454	32154
2012 SP					10 22.158	0.35	6	68.889	-76 51 30.36	0.27	6	68.889	2154	2657		52154
2013	+ 3	305	8.4	F0	10 26.032	0.07	2	71.787	+ 4 03 09.39	0.01	2	71.787		2659		4279
2014	+ 1	390	8.8	K2	2 10 39.137	0.01	2	71.865	+ 2 21 40.21	0.37	2	71.865				4280
2015	-31	882	5.24	A0	10 42.373	0.03	93	70.967	-30 57 27.08	0.03	91	70.967	78	2663	456	30078
2016	-41	613	8.57	G5	10 48.745	0.19	3	69.779	-41 29 56.41	0.14	3	69.779		2666		258
2017	-66	133	8.27	K0	10 49.065	0.09	4	68.964	-66 00 28.00	0.10	4	68.964		2667		18642
2018	+ 4	367	6.56	F0	10 52.761	0.20	2	71.324	+ 4 46 47.16	0.32	2	71.324		2669		4281
2019	-53	409	9.3	G0	2 10 53.768	0.23	4	68.768	-52 43 11.08	0.08	4	68.768				4282
2020	-23	822	7.34	G5	10 55.649	0.05	4	70.314	-23 06 16.99	0.08	4	70.314		2671		4283
2021	-36	831	8.6	K0	11 08.064	0.13	4	70.258	-36 38 41.20	0.13	4	70.258				4284
2022	-64	158	9.2	G5	11 12.862	0.29	4	68.490	-64 31 47.43	0.23	4	68.490				18643
2023	-10	455	8.4	G0	11 15.038	0.10	2	71.354	-10 18 18.40	0.16	2	71.354				4285

1962 9.3m-9.4m, 170, 104°.

2000 SDS, 9.4m, 475, 138°.

CATALOG OF 23,001 STARS FOR 1950.0

263

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*	
2024	-25	856	7.8	F5	2 11 19.292	0.08	3	69.601	-25 01 25.02	0.09	3	69.601				4286	
2025	-20	418	8.9	F8	11 25.560	0.05	2	71.426	-19 46 38.44	--	1	71.978				4287	
2026	-9	429	6.70	K0	11 25.696	0.04	2	71.368	-9 17 52.34	0.34	2	71.368		2682		4288	
2027	-18	385	8.6	K0	11 30.032	0.19	2	71.776	-18 12 02.60	0.03	2	71.776				4289	
2028	-4	361	8.5	K2	11 42.244	0.10	2	72.204	-3 51 58.80	0.23	2	72.204				4290	
2029	-17	422	8.1	G5	2 11 42.558	0.28	2	72.201	-17 07 23.53	0.15	2	72.201				4291	
2030	+28	374	6.57	G5	11 43.893	0.16	6	69.691	+28 27 33.39	0.16	6	69.691	2155	2689		32155	
2031	-48	589	8.5	G5	11 48.322	0.05	4	69.867	-48 00 48.35	0.18	4	69.867				259	
2032	-11	426	8.7	F5	11 55.033	0.24	2	72.259	-10 54 10.00	0.51	2	72.259				4292	
2033	+0	369	7.49	K0	12 02.237	0.13	2	71.305	+1 26 42.32	0.08	2	71.305		2693		4293	
2034	-1	306	8.8	G0	2 12 05.477	0.19	2	71.328	-1 26 00.08	0.08	2	71.328		2694		4294	
2035	-31	891	9.2	K0	12 09.378	0.07	3	70.498	-31 33 16.12	0.20	3	70.498				4295	
2036	-13	412	8.9	G5	12 10.188	0.11	2	71.351	-13 08 43.94	0.11	2	71.351				4296	
2037	-47	679	8.5	K0	12 13.501	0.10	4	70.326	-47 37 02.96	0.13	4	70.326				260	
2038	-35	779	9.1	F2	12 24.364	0.19	4	70.792	-35 24 23.12	0.23	4	70.792				4297	
2039	-76	177	9.1	G0	2 12 27.768	0.11	4	69.068	-76 19 19.46	0.11	4	69.068				18644	
2039	SP				12 27.583	0.53	4	69.272	-76 19 19.34	0.44	4	69.272				18644	
2040	-41	621	5.86	K0	12 30.514	0.03	62	71.353	-41 23 56.71	0.04	61	71.346	1060	2697	459	31060	
2041	+3	310	8.4	F8	12 31.628	0.13	2	71.219	+3 37 10.81	0.22	2	71.219		2698		4298	
2042	-8	411	8.5	G5	12 33.002	0.35	2	70.721	-7 48 10.97	0.18	2	70.721				4299	
2043	-38	755	7.52	K0	2 12 42.618	0.10	5	70.414	-37 45 54.16	0.10	5	70.414		2703		4300	
2044	-30	791	9.4	K2	12 45.518	0.10	4	69.761	-29 53 02.55	0.13	4	69.761				4301	
2045	-12	418	8.1	A0	12 46.087	0.29	2	70.783	-12 17 02.58	0.05	2	70.783				4302	
2046	+24	329	5.64	F5	12 52.042	0.03	17	71.139	+24 48 42.48	0.09	16	71.153	1059	2706	460	31059	
2047	-67	144	9.1	G5	12 52.055	0.13	4	69.362	-67 01 36.28	0.11	4	69.362				18645	
2048	-64	159	7.85	G5	2 12 55.000	0.22	4	69.386	-64 01 42.06	0.11	4	69.386		2708		4303	
2049	-44	666	8.8	K0	13 00.744	0.14	4	70.282	-43 47 14.25	0.16	4	70.282				261	
2050	-60	192	9.14	K0	13 01.809	0.13	4	69.958	-60 23 38.22	0.05	4	69.958		2713		4304	
2051*	-40	574	8.6	F2	13 03.458	0.24	4	70.723	-40 01 28.73	0.16	4	70.723				262	
2052	-26	814	8.6	G0	13 05.061	0.18	3	69.495	-26 08 48.81	0.17	3	69.495				4305	
2053	-33	765	8.1	G5	2 13 06.261	0.09	4	70.754	-32 41 53.71	0.14	4	70.754				4306	
2054	-55	404	9.3	K5	13 10.161	0.14	3	70.065	-54 41 05.88	0.08	3	70.065				4307	
2055	-23	845	7.90	M0	13 17.983	0.15	4	70.249	-23 36 02.43	0.07	4	70.249		2720		4308	
2056	-72	160	9.1	G5	13 21.609	0.10	4	69.997	-71 46 13.58	0.13	4	69.997				18646	
2057	-34	840	8.6	K5	13 21.821	0.17	4	70.978	-33 59 47.24	0.21	4	70.978				4309	
2058	-57	420	8.9	K2	2 13 22.012	0.10	4	70.242	-57 09 11.17	0.19	4	70.242				4310	
2059	-41	626	6.96	K5	13 23.757	0.14	4	70.580	-41 18 03.90	0.07	4	70.580		2722		263	
2060	-5	417	8.1	G5	13 23.772	0.19	2	71.329	-5 18 44.52	0.00	2	71.329				4311	
2061	-60	193	8.7	K5	13 24.102	0.12	4	70.255	-60 05 23.76	0.12	4	70.255				4312	
2062	-21	403	8.1	G5	13 25.609	0.08	4	70.250	-21 33 01.46	0.10	4	70.250				4313	
2063	-51	552	8.07	G5	2 13 36.971	0.12	4	70.843	-51 07 07.29	0.01	3	70.832		2726		264	
2064	-15	396	9.0	K0	13 41.018	0.18	2	71.831	-14 56 43.66	0.00	2	71.831				4314	
2065	-26	816	8.6	K0	13 45.386	0.06	4	70.252	-25 45 21.89	0.09	4	70.252				4315	
2066	-10	462	7.24	G0	13 48.100	0.03	2	71.781	-10 03 09.05	0.09	2	71.781		2729		4316	
2067	+0	373	8.5	K0	13 49.265	0.06	2	71.824	+0 36 04.71	0.23	2	71.824				4317	
2068	+3	313	8.2	F0	2 13 49.674	0.20	2	71.833	+4 23 41.26	0.35	2	71.833				4318	
2069	+1	403	7.6	G5	13 53.174	0.19	2	72.201	+2 00 24.69	0.07	2	72.201		2730		4319	
2070	-45	726	9.2	G0	13 53.995	0.11	4	70.788	-44 58 09.12	0.18	4	70.788				265	
2071	-29	807	7.8	K0	13 54.265	0.09	4	70.234	-28 48 56.33	0.11	4	70.234				4320	
2072	-38	759	9.3	G0	14 03.613	0.19	4	71.079	-38 05 04.54	0.07	4	71.079				4321	
2073	-75	161	8.4	K0	2 14 09.886	0.19	4	69.841	-75 36 37.71	0.22	4	69.841				18647	
2073	SP				14 09.919	0.28	4	69.821	-75 36 37.32	0.25	4	69.821				18647	
2074	-47	687	9.5	K0	14 12.805	0.18	4	71.040	-47 06 57.60	0.11	4	71.040				266	
2075	-3	345	8.76	K0	14 18.017	0.18	2	71.346	-3 08 07.66	0.43	2	71.346		2738		4322	
2076	+23	307	6.50	G5	14 20.403	0.09	6	70.745	+23 32 13.69	0.12	6	70.745	2156	2743		32156	
2077	-53	418	8.7	K0	2 14 22.648	0.18	4	69.610	-53 37 23.84	0.08	4	69.610				4323	
2078	-7	392	7.04	A0	14 27.982	0.21	2	71.827	-6 48 33.85	0.11	2	71.827		2747		4324	
2079	-7	393	5.70	G5	14 29.384	0.02	111	70.771	-6 39 08.08	0.03	110	70.769	80	2748	465	80080	
2080	-43	696	7.58	G5	14 30.672	0.09	4	70.371	-43 29 33.16	0.13	4	70.371		2750		267	
2081	+3	317	8.7	K0	14 36.408	0.07	2	71.660	+4 16 21.03	0.12	2	71.660				4325	
2082	-52	285	3.78	B8	2 14 43.615	0.03	70	71.203	-51 44 35.31	0.04	70	71.203		82	2756	466	30082
2083	-1	311	9.0	K0	14 46.116	0.03	2	72.428	-1 11 21.66	0.16	2	72.428				4326	
2084	-24	997	8.5	K5	14 48.133	0.10	4	70.284	-24 34 49.54	0.20	4	70.284				4327	
2085	-13	420	8.7	K2	15 07.645	--	1	70.653	-12 55 04.98	--	1	70.653				4328	
2086	-0	343	8.3	K2	15 11.070	0.05	2	72.249	-0 23 24.97	0.12	2	72.249				4329	
2087	-36	859	6.74	G5	2 15 13.008	0.06	23	70.968	-36 12 50.26	0.07	23	70.968	1062	2765	467	31062	
2088	-2	389	8.1	K0	15 14.827	--	1	71.645	-2 16 15.34	--	1	71.645		2766		4330	
2089	-37	866	8.6	K2	15 15.942	0.08	4	70.301	-37 21 56.75	0.10	4	70.301				4331	
2090	+19	340	5.69	A0	15 20.283	--	1	67.885	+19 40 15.13	--	1	67.885	81	2767	468	30081	
2091	-45	733	8.8	K5	15 25.268	0.12	4	70.326	-44 59 40.23	0.10	4	70.326				268	
2092	+1	410	5.82	F8	2 15 25.907	0.04	24	71.298	+1 31 28.35	0.08	23	71.317	1061	2770	470	31061	
2093	-68	130	9.2	K2	15 35.436	0.12	4	70.353	-68 37 19.70	0.09	4	70.353				18648	
2094	-16	421	8.4	K2	15 37.120	0.04	2	71.787	-16 08 31.26	0.10	2	71.787				4332	
2095	-31	922	8.6	K2	15 43.615	0.04	3	69.091	-30 41 55.41	0.26	3	69.091				4333	
2096	-14	423	8.0	M2	15 44.347	0.46	2	71.281	-14 21 50.49	0.25	2	71.281				4334	

2051 9.5m-9.5m, 0°2, 113°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
2097	-6	447	8.9	K5	2 15 54.272	0.21	3	72.124	-6 14 50.39	0.14	3	72.124				4335
2098	-50	661	9.2	G5	15 55.107	0.13	4	69.213	-50 28 31.70	0.12	4	69.213				269
2099	-9	440	7.9	G5	15 59.844	0.13	3	72.093	-8 35 21.82	0.29	3	72.093				4336
2100	-44	680	9.1	K0	16 17.356	0.09	4	70.009	-44 10 17.94	0.23	4	70.009				270
2101*	-63	152	8.3	F5	16 19.006	0.08	4	69.605	-62 58 09.06	0.23	4	69.605				4337
2102	-79	57	9.00	G0	2 16 25.977	0.29	5	70.218	-79 15 24.96	0.19	5	70.218		2791		18649
2102	SP				16 26.045	0.04	4	69.754	-79 15 25.03	0.19	4	69.754		2791		18649
2103	-38	769	8.8	K2	16 26.162	0.12	4	70.154	-38 09 09.71	0.08	4	70.154				4338
2104	-20	437	7.2	K5	16 33.650	--	1	71.604	-19 45 50.60	--	1	71.604				4339
2105	-27	802	7.7	K0	16 33.788	0.13	4	69.085	-26 40 11.69	0.05	4	69.085				4340
2106	+2	358	7.7	G5	2 16 34.328	0.22	2	71.280	+3 18 26.27	0.51	2	71.280				4341
2107	-1	316	8.6	G0	16 42.776	0.19	2	70.753	-1 00 32.61	0.24	2	70.753				4342
2108	+1	412	7.85	K0	16 44.049	0.04	2	71.307	+2 26 07.54	0.05	2	71.307			475	4343
2109	-4	378	8.6	G5	16 47.876	0.03	2	71.339	-4 21 24.58	0.35	2	71.339				4344
2110	-11	440	8.3	K2	16 58.667	0.08	2	71.343	-10 50 50.62	0.03	2	71.343				4345
2111	-19	426	8.4	K2	2 17 03.858	0.06	2	71.277	-18 47 57.86	0.16	2	71.277				4346
2112	-42	784	8.7	G5	17 09.180	0.07	4	70.404	-42 14 56.34	0.27	4	70.404				271
2113	-5	438	6.55	A2	17 09.921	0.23	2	71.292	-4 34 29.57	0.08	2	71.292		2799		4347
2114	-68	132	7.7	M1	17 13.682	0.17	4	69.730	-68 01 05.79	0.19	4	69.730				18650
2115	-13	427	8.6	G0	17 14.395	0.16	3	70.787	-12 59 25.61	0.06	3	70.787				4348
2116	-2	396	8.4	K0	2 17 14.860	0.05	2	71.292	-2 27 16.39	0.09	2	71.292				4349
2117	-54	440	7.84	K2	17 16.998	0.11	4	69.564	-54 10 01.45	0.14	4	69.564		2801		4350
2118	-25	899	8.8	K5	17 17.696	0.09	4	69.892	-25 31 54.09	0.20	4	69.892				4351
2119	-39	679	7.89	K0	17 22.649	0.10	4	70.004	-39 12 23.70	0.04	4	70.004		2803		4352
2120	-59	202	9.5	K0	17 25.356	0.07	4	69.795	-59 26 56.01	0.27	4	69.795				4353
2121	-11	442	8.7	K0	2 17 26.204	0.22	2	70.821	-10 36 52.28	0.28	2	70.821				4354
2122	-32	851	9.3	G5	17 26.707	0.09	4	70.016	-32 35 07.81	0.12	4	70.016				4355
2123	-24	1021	8.54	K2	17 30.115	0.12	4	70.476	-24 05 32.75	0.13	4	70.476		2806		4356
2124	-46	691	8.81	K0	17 32.029	0.07	4	70.010	-45 53 40.22	0.16	4	70.010		2807		272
2125	-24	1023	8.53	F8	17 36.572	0.07	4	69.989	-23 51 48.22	0.05	4	69.989		2811		4357
2126	-18	406	8.3	F8	2 17 37.383	0.11	2	70.484	-18 14 39.81	0.26	2	70.484				4358
2127	-48	607	8.7	K0	17 38.318	0.15	4	70.080	-48 00 09.21	0.11	4	70.080				273
2128	-51	562	8.5	K2	17 46.673	0.08	4	69.560	-51 00 24.73	0.22	3	69.122				274
2129	-21	417	8.3	K0	17 48.348	0.15	4	70.041	-21 03 24.40	0.08	4	70.041				4359
2130	-15	402	8.2	K0	17 53.348	0.12	2	71.232	-14 51 12.35	0.31	2	71.232				4361
2131	-55	417	7.8	K0	2 18 01.052	0.18	4	69.576	-55 14 45.76	0.13	4	69.576				4362
2132	-7	407	8.0	G0	18 01.406	0.11	2	71.906	-6 36 25.79	0.04	2	71.906				4363
2133	-70	140	8.8	G0	18 03.753	0.14	4	69.089	-70 06 57.77	0.06	4	69.089				18651
2134	-22	392	8.15	K0	18 06.608	0.11	4	70.359	-22 20 53.54	0.16	4	70.359		2818		4364
2135	-27	811	8.1	K0	18 08.021	0.12	4	70.300	-27 30 05.69	0.13	4	70.300				4365
2136	-56	413	5.56	K5	2 18 17.045	0.15	6	68.783	-56 10 25.18	0.16	6	68.783	2158	2821	476	32158
2137	-12	436	7.5	G5	18 17.892	0.21	2	71.290	-11 50 07.03	0.17	2	71.290				4366
2138	-29	837	8.6	K2	18 18.623	0.25	3	70.553	-29 04 53.21	0.07	3	70.553				4367
2139	-35	809	8.6	K0	18 23.509	0.13	4	69.844	-35 20 22.77	0.13	4	69.844				4368
2140	-56	415	7.74	K2	18 38.842	0.22	4	70.116	-56 19 33.82	0.21	4	70.116		2828		4369
2141	-83	43	9.2	F8	2 18 43.731	0.09	4	68.963	-82 47 02.11	0.16	4	68.963				18652
2141	SP				18 43.592	0.20	4	69.818	-82 47 02.07	0.14	4	69.818				18652
2142	-34	864	9.1	G5	18 53.356	0.26	3	70.229	-34 06 54.26	0.10	3	70.229				4370
2143	-70	142	8.8	G5	19 12.077	0.17	4	69.794	-69 39 36.03	0.23	4	69.794				18653
2144	-8	428	7.5	G5	19 12.253	0.05	2	71.821	-7 46 15.86	0.17	2	71.821				4371
2145	+0	391	8.2	K2	2 19 14.571	0.07	2	71.337	+0 44 32.21	--	1	71.760		2842		4372
2146	-10	479	8.6	G5	19 22.180	0.07	2	71.868	-9 36 44.94	0.37	2	71.868				4373
2147	+4	386	8.1	G0	19 24.037	0.02	2	71.851	+4 31 07.19	0.44	2	71.851				4374
2148	-30	839	9.0	K2	19 25.276	0.08	4	70.547	-29 50 16.60	0.08	4	70.547				4375
2149	-58	204	8.0	G5	19 35.049	0.16	5	70.329	-57 54 48.06	0.35	5	70.329				4376
2150	-1	322	5.62	A5	2 19 39.356	0.05	6	69.833	-1 06 42.63	0.11	6	69.833	2160	2850	479	32160
2151	+1	417	8.6	K0	19 41.027	0.34	2	72.222	+2 13 32.72	0.28	2	72.222				4377
2152	-40	594	10.2	G5	19 41.574	0.06	4	70.048	-40 22 59.18	0.35	4	70.048				275
2153	-18	409	5.99	K0	19 43.566	0.03	69	71.408	-17 53 21.01	0.03	69	71.408	1064	2853	480	31064
2154	-0	357	8.6	K0	19 48.920	--	1	72.790	-0 02 05.22	--	1	72.790				4378
2155	-39	689	8.4	G5	2 19 49.414	0.21	4	70.183	-38 56 00.80	0.17	4	70.183				4379
2156	-52	297	8.13	K5	19 50.860	0.11	4	70.288	-52 21 44.00	0.15	4	70.288		2857		4380
2157	-61	201	9.3	G5	19 51.388	0.15	3	69.701	-61 26 42.34	0.19	3	69.701				4381
2158	-17	457	7.8	K0	19 56.103	0.09	2	71.829	-16 44 03.77	0.43	2	71.829				4382
2159	-49	654	9.4	F8	19 59.220	0.06	4	70.273	-48 57 54.08	0.16	4	70.273				276
2160	-36	893	7.8	K0	2 20 01.369	0.20	4	70.566	-36 20 01.20	0.10	4	70.566				4383
2161	-15	414	8.0	G0	20 03.500	--	1	71.978	-15 27 49.63	--	1	71.978				4384
2162	-31	949	9.1	K5	20 04.870	0.09	3	69.424	-31 16 25.28	0.13	3	69.424				4385
2163	-50	681	7.52	G5	20 08.723	0.26	5	71.125	-49 44 53.34	0.15	5	71.125		2859		277
2164	-61	202	8.3	K2	20 10.976	0.05	4	70.861	-60 39 30.50	0.09	4	70.861				4386
2165	-58	205	8.4	K0	2 20 11.411	0.17	3	70.939	-58 19 47.67	0.14	2	70.971				4387
2166	-44	698	9.3	K0	20 13.755	0.16	4	70.814	-43 50 26.46	0.13	4	70.814				278
2167	-43	724	6.30	G5	20 14.225	0.13	6	69.908	-43 25 38.68	0.08	6	69.908	2162	2861		32162
2168	-73	161	7.6	K2	20 15.292	0.13	4	70.233	-73 32 26.52	0.18	4	70.233				18654
2169	-24	1038	5.37	F5	20 15.537	0.02	91	70.993	-24 02 34.95	0.03	90	70.993	83	2862	482	80083

2101 8.2m-11.8m, 1°9, 121°.

CATALOG OF 23,001 STARS FOR 1950.0

CATALOG OF 23,001 STARS FOR 1950.0																265
No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
2170	-26	849	8.4	K2	2 20 17.328	0.08	4	70.751	-25 47 48.71	0.13	4	70.751				4388
2171	+ 3	327	8.0	K0	20 24.132	--	1	72.670	+ 3 34 18.92	--	1	72.670				4389
2172	-72	173	8.1	K0	20 24.448	0.11	4	70.806	-72 32 21.48	0.18	4	70.806				18655
2173	-50	683	9.4	K0	20 30.188	0.09	2	69.764	-50 24 41.50	0.02	2	69.764				279
2174	-64	162	8.2	K0	20 31.461	0.26	4	70.394	-63 41 40.90	0.14	4	70.394				4390
2175	-39	695	7.78	K0	2 20 33.410	0.07	4	70.313	-39 38 26.80	0.04	4	70.313		2867		4391
2176	-19	444	6.43	G5	20 36.540	--	1	71.986	-18 34 50.42	--	1	71.986		2868		4392
2177	-30	848	8.8	K0	20 41.167	0.18	4	70.240	-30 08 27.55	0.06	4	70.240				4393
2178	-32	867	8.8	K0	20 41.285	0.10	4	70.294	-32 33 45.37	0.24	4	70.294				4394
2179	-69	113	4.26	A2	20 50.928	0.05	27	70.477	-68 53 12.13	0.06	27	70.477	1065	2872	485	31065
2180	- 6	470	7.04	F0	2 20 52.833	--	1	71.989	- 6 25 09.10	--	1	71.989		2873		4395
2181	+ 1	423	8.6	K0	20 58.333	--	1	71.962	+ 2 21 27.94	--	1	71.962				4396
2182	-42	802	9.1	A3	21 01.088	0.11	3	70.505	-42 13 01.47	0.04	3	70.505				280
2183	-27	827	7.01	G5	21 09.460	0.17	4	70.320	-27 13 17.32	0.07	4	70.320		2879		4397
2184	-56	424	8.9	G5	21 17.773	0.15	3	69.457	-55 58 32.00	0.26	3	69.457				4398
2185	-47	727	9.3	G5	2 21 21.006	0.12	4	70.630	-47 22 02.63	0.13	4	70.630				281
2186	-55	423	8.2	K5	21 28.847	0.10	4	70.838	-54 45 27.71	0.31	3	70.826				4399
2187	-57	434	8.60	G5	21 34.341	0.11	4	70.045	-56 46 16.68	0.15	4	70.045		2883		4400
2188	-83	44	7.85	K0	21 48.589	0.19	4	70.288	-83 10 54.21	0.23	4	70.288		2891		18656
2188	SP				21 48.391	0.08	4	69.855	-83 10 54.77	0.10	4	69.855		2891		18656
2189	- 9	455	8.5	F0	2 21 49.389	0.47	2	71.303	- 8 50 05.59	0.00	2	71.303				4401
2190	- 2	405	8.2	F5	22 03.900	0.38	2	71.331	- 2 14 08.71	0.21	2	71.331				4402
2191	-13	440	7.65	F5	22 03.921	0.17	2	71.281	-13 31 07.30	0.05	2	71.281		2899		4403
2192	-18	416	8.9	K0	22 04.133	0.38	3	71.807	-17 40 35.28	0.25	3	71.807				4404
2193	-26	857	6.58	K0	22 05.305	0.11	7	70.004	-26 04 24.32	0.05	6	69.851	2163	2900	488	32163
2194	+ 9	316	5.53	B5	2 22 08.004	0.11	6	69.532	+10 23 06.53	0.09	6	69.532	2164	2901	489	32164
2195	-12	448	9.0	K0	22 13.182	0.27	2	71.787	-12 03 20.43	0.19	2	71.787				4405
2196	+ 4	392	8.0	F0	22 13.284	0.10	3	70.780	+ 4 47 57.11	0.18	3	70.780				4406
2197	-20	447	8.5	F8	22 22.297	0.20	4	70.262	-20 15 53.99	0.03	4	70.262				4407
2198	-44	713	8.4	K0	22 26.604	0.06	4	69.985	-44 33 12.54	0.22	4	69.985				282
2199	-74	194	6.00	K0	2 22 32.874	0.03	72	71.285	-73 52 19.67	0.05	72	71.285	1067	2913	490	31067
2199	SP				22 32.870	0.06	39	71.215	-73 52 19.60	0.12	39	71.215	1067	2913	490	51067
2200	-29	864	7.7	F5	22 33.082	0.25	3	70.199	-28 52 36.32	0.02	3	70.199				4408
2201	- 0	360	8.28	K0	22 33.878	0.05	2	71.287	+ 0 24 40.43	0.09	2	71.287		2914		4409
2202	-10	487	7.8	G5	22 34.323	0.06	2	71.271	-10 25 20.34	0.20	2	71.271				4410
2203	- 5	453	8.5	F5	2 22 36.498	0.05	2	71.291	- 4 58 20.21	0.23	2	71.291				4412
2204	-62	199	8.2	K2	22 36.503	0.10	4	69.975	-61 59 40.06	0.17	4	69.975				4411
2205	-45	769	8.0	K0	22 37.491	0.18	4	70.050	-45 22 00.85	0.13	4	70.050				283
2206	- 3	375	8.6	K5	22 41.678	0.22	2	71.352	- 3 26 33.60	0.06	2	71.352				4413
2207	-65	174	7.7	M1	22 45.855	0.12	4	69.809	-65 33 42.86	0.29	4	69.809				18657
2208	+ 2	371	8.7	K2	2 22 46.064	0.01	2	71.814	+ 3 23 02.82	0.14	2	71.814				4414
2209	+ 0	395	8.7	K0	22 47.065	0.31	2	71.821	+ 1 08 56.77	0.37	2	71.821				4415
2210	-36	908	8.0	K0	22 53.318	0.20	4	70.303	-36 06 32.60	0.17	4	70.303				4416
2211	-22	409	7.74	F8	23 06.374	0.13	4	70.052	-22 02 04.40	0.16	4	70.052		2924		4417
2212	-64	166	7.6	K5	23 13.888	0.10	4	69.995	-63 57 11.79	0.17	4	69.995				18658
2213	-24	1074	8.4	M3	2 23 16.857	0.09	4	70.763	-24 11 49.37	0.14	4	70.763				4418
2214	-34	892	8.12	A3	23 20.958	0.12	4	70.302	-34 16 37.69	0.11	4	70.302		2926		4419
2215	-32	878	8.8	G5	23 27.986	0.07	4	71.264	-32 01 23.89	0.23	4	71.264				4420
2216	-33	823	8.5	G5	23 29.078	0.11	4	70.584	-33 24 10.86	0.09	4	70.584				4421
2217	-60	199	5.47	F2	23 29.734	0.06	25	71.418	-60 32 09.85	0.08	24	71.441	84	2931	492	30084
2218	-12	451	4.90	A0	2 23 31.950	0.05	13	71.705	-12 30 54.46	0.08	13	71.705	1066	2932	493	31066
2219	-15	426	5.84	A2	23 37.588	0.04	2	71.857	-15 33 56.14	0.41	2	71.857		2933		4422
2220	+ 5	338	6.67	F2	23 38.049	0.12	6	71.463	+ 6 04 06.06	0.09	6	71.463	2166	2934		32166
2221	-49	674	7.8	K0	23 38.535	0.18	4	70.799	-48 42 57.31	0.09	4	70.799				284
2222	-51	583	10.1	F5	23 40.523	0.32	4	71.503	-51 15 26.43	0.08	4	71.503				285
2223	-37	922	8.5	K0	2 23 41.662	0.08	4	71.045	-37 31 13.15	0.02	4	71.045				4423
2224	-23	915	8.6	K2	23 57.833	0.06	4	70.257	-23 08 33.20	0.11	4	70.257				4424
2225	-75	172	7.97	K0	23 59.595	0.17	4	71.308	-74 39 42.51	0.11	4	71.308		2936		18659
2226	-82	42	8.3	M1	24 00.146	0.07	4	70.460	-81 46 36.50	0.38	4	70.460				18660
2226	SP				24 00.214	0.21	5	71.351	-81 46 36.80	0.44	4	71.149				18660
2227	-35	846	9.1	G5	2 24 10.432	0.07	4	71.262	-34 55 31.65	0.11	4	71.262				4425
2228	-20	455	6.05	K0	24 15.822	0.10	6	71.400	-20 16 03.68	0.12	6	71.400	2167	2941	495	32167
2229	-23	918	8.6	F8	24 29.145	0.15	4	69.466	-23 11 38.75	0.16	4	69.466				4426
2230	-17	472	9.0	G5	24 29.915	--	1	71.981	-17 23 07.04	--	1	71.981				4427
2231	-40	619	8.2	K2	24 42.473	0.05	4	70.775	-39 48 39.37	0.17	4	70.775				4430
2232	-41	693	8.6	K0	2 24 47.718	0.16	4	70.778	-41 35 27.20	0.16	4	70.778				286
2233	- 1	336	8.7	F0	24 49.268	--	1	72.624	- 1 14 52.45	--	1	72.624				4431
2234	-53	437	8.3	K5	24 50.878	0.13	3	69.682	-53 32 23.25	0.20	3	69.682				4432
2235	-46	722	7.05	K0	24 52.735	0.05	5	70.728	-46 13 25.78	0.14	5	70.728		2950		287
2236	- 2	412	8.3	F2	24 59.999	--	1	72.760	- 2 10 06.31	--	1	72.760				4434
2237	-48	637	4.44	B5	2 25 09.170	0.04	17	70.177	-47 55 39.30	0.08	17	70.177	86	2954	498	30086
2238	- 7	432	7.29	G5	25 09.616	0.31	2	72.312	- 7 09 06.74	0.19	2	72.312		2955		4435
2239	-80	44	9.21	K0	25 15.955	0.11	4	70.103	-80 16 12.97	0.12	4	70.103		2958		18661
2239	SP				25 15.859	0.16	4	70.315	-80 16 13.28	0.10	4	70.315		2958		18661
2240	+ 7	388	4.34	A0	25 29.857	0.06	7	71.962	+ 8 14 12.80	0.09	7	71.962	85	2960	501	30085

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
2241	-34	903	7.70	F8	2 25 35.459	0.21	4	71.118	-34 07 11.96	0.13	4	71.118		2962		4437
2242	-29	889	8.1	G5	25 44.158	0.08	4	70.795	-29 01 13.55	0.21	4	70.795				4438
2243*	-37	934	8.6	F5	25 44.530	0.09	4	70.846	-36 55 00.63	0.10	4	70.846				4439
2244	-41	697	9.6	F5	25 47.616	0.12	3	70.526	-41 24 17.03	0.07	3	70.526				288
2245	+ 0	404	8.5	G5	25 48.233	0.09	2	72.241	+ 1 15 33.38	0.02	2	72.241				4440
2246	-31	984	7.5	M0	2 25 49.061	0.11	4	70.775	-30 39 51.55	0.13	4	70.775				4441
2247	-77	110	8.9	M0	25 51.053	0.14	4	70.382	-77 23 50.35	0.32	4	70.382				18662
2247	SP				25 51.049	0.15	4	71.148	-77 23 49.75	0.44	4	71.148				18662
2248	-34	905	5.16	A2	25 54.785	0.11	6	70.716	-34 02 03.09	0.20	6	70.716	2168	2967		32168
2249	-26	882	7.82	K0	26 01.857	0.16	4	70.285	-26 39 13.14	0.13	4	70.285		2968		4442
2250	- 4	404	8.5	K0	2 26 02.673	--	1	72.804	- 3 39 35.92	--	1	72.804				4443
2251	-10	497	8.6	A0	26 09.092	0.17	2	72.394	- 9 56 53.71	0.12	2	72.394				4444
2252*	- 9	467	8.9	G5	26 15.953	--	1	72.771	- 8 58 32.18	--	1	72.771				4445
2253	-70	154	9.1	K0	26 21.048	0.24	3	70.165	-70 07 50.50	0.00	2	69.810				18663
2254	-20	463	8.2	F0	26 22.710	0.01	2	72.260	-20 01 17.41	0.18	2	72.260				4446
2255	-15	437	8.9	F8	2 26 24.604	0.25	2	72.439	-15 31 19.29	0.10	2	72.439				4447
2256	-33	840	9.0	G5	26 27.186	0.10	4	70.734	-33 09 07.18	0.12	3	70.777				4448
2257*	-58	214	7.58	F8	26 28.154	0.10	4	70.471	-58 21 45.84	0.20	4	70.471		2977		4449
2258	- 6	486	8.1	K0	26 33.859	0.02	3	72.110	- 5 40 07.99	0.31	3	72.110				4450
2259	-25	968	8.7	G0	26 33.896	0.11	4	70.617	-25 12 15.87	0.12	4	70.617				4451
2260	-52	308	8.9	G0	2 26 36.718	0.13	4	70.349	-52 34 23.38	0.18	4	70.349				4452
2261	-39	716	8.8	F5	26 41.985	0.04	4	71.042	-39 10 58.78	0.08	4	71.042				4453
2262	-22	422	8.5	K0	26 43.943	0.13	4	70.623	-21 47 40.99	0.12	4	70.623				4454
2263	-19	462	8.3	K2	26 46.971	0.30	2	71.735	-18 45 18.94	0.53	2	71.735				4455
2264	-36	935	9.4	G0	26 51.719	0.10	4	70.766	-35 54 29.82	0.19	4	70.766				4456
2265	-40	628	8.09	G5	2 26 53.517	0.24	4	70.322	-40 39 27.69	0.22	4	70.322				289
2266	-64	174	6.36	B9	26 54.172	0.06	6	69.536	-64 31 21.38	0.06	6	69.536	2170	2981		32170
2267	-67	158	8.6	K0	26 55.620	0.07	4	70.574	-67 23 15.14	0.21	4	70.574		2982		18664
2268	-11	470	8.3	G5	26 55.774	0.05	2	71.287	-11 19 21.44	0.05	2	71.287				4457
2269	-44	745	8.6	K5	26 55.838	0.04	4	70.301	-44 20 16.55	0.11	4	70.301				290
2270	-57	449	9.1	K2	2 26 58.077	0.14	4	70.964	-57 00 59.98	0.21	4	70.964				4458
2271	-27	871	8.1	G5	27 01.505	0.11	4	69.750	-27 28 48.89	0.08	4	69.750				4459
2272	+ 4	405	8.8	K0	27 04.809	0.14	2	71.331	+ 4 39 41.01	0.02	2	71.331				4460
2273	-56	435	9.1	K0	27 04.918	0.11	4	70.243	-55 50 01.50	0.20	4	70.243				4461
2274	-56	436	8.6	F0	27 08.128	0.21	4	70.498	-56 39 32.64	0.08	4	70.498				4462
2275	-24	1106	7.52	K0	2 27 17.618	0.20	3	69.721	-24 19 34.94	0.22	3	69.721				4463
2276	+ 3	346	8.2	F8	27 30.912	0.10	2	70.792	+ 4 22 59.23	0.21	2	70.792				4464
2277	- 3	389	8.1	F8	27 32.848	0.17	2	71.253	- 3 26 58.66	0.03	2	71.253				4465
2278	-14	468	8.7	K0	27 33.074	0.13	2	71.317	-14 11 42.33	0.21	2	71.317				4466
2279	-76	201	7.03	K0	27 33.745	0.13	4	69.810	-75 57 48.12	0.12	4	69.810				18665
2279	SP				2 27 33.741	0.18	4	69.811	-75 57 48.26	0.22	4	69.811				18665
2280	- 0	373	8.7	F8	27 34.088	0.06	2	71.276	- 0 07 07.62	0.22	2	71.276				4467
2281	+24	358	5.86	F5	27 39.496	0.17	7	70.217	+25 00 50.98	0.21	6	70.100	2171	3001		32171
2282	- 0	374	8.4	A2	27 42.849	0.02	2	71.322	- 0 18 43.02	0.16	2	71.322				4468
2283	-17	480	8.6	G5	27 44.516	0.14	2	71.307	-17 11 57.57	0.08	2	71.307				4469
2284	-42	836	9.1	G5	2 27 47.049	0.15	4	69.818	-42 04 47.25	0.20	4	69.818				291
2285	+19	365	6.14	F0	27 49.971	0.11	6	69.557	+19 38 03.11	0.13	6	69.557				32172
2286	- 6	490	8.9	F2	27 52.255	0.19	2	71.768	- 6 33 03.35	0.22	2	71.768				4470
2287	-61	210	8.39	K0	27 53.709	0.06	4	69.991	-61 08 09.22	0.07	4	69.991				4471
2288	- 5	471	7.5	A0	27 56.371	0.10	2	71.792	- 5 15 08.64	0.53	2	71.792				4472
2289	+17	380	6.41	G5	2 28 07.717	0.06	23	71.736	+17 28 59.81	0.09	23	71.736	1069	3009	506	31069
2290	-86	28	7.76	F0	28 08.502	0.02	261	70.948	-85 56 32.96	0.03	259	70.942	1656	3011	507	61656
2290	SP				28 08.506	0.02	240	71.137	-85 56 32.96	0.03	231	71.104	1656	3011	507	71656
2291	-49	694	8.5	K5	28 11.884	0.15	4	70.116	-49 02 05.15	0.13	4	70.116				292
2292	-43	762	8.8	F0	28 14.023	0.06	4	69.855	-43 27 59.72	0.24	4	69.855				293
2293	-12	469	8.1	G0	2 28 24.574	0.16	2	71.809	-12 26 40.13	0.28	2	71.809				4473
2294	-31	1010	8.4	M0	28 28.272	0.08	4	68.609	-31 29 58.49	0.20	4	68.609				4474
2295	-50	736	9.2	K0	28 28.730	0.19	5	70.613	-50 08 58.84	0.11	5	70.613				294
2296	-38	837	9.3	K0	28 34.693	0.16	4	70.797	-38 26 07.27	0.27	4	70.797				4475
2297	-66	145	9.5	K0	28 39.165	0.10	4	69.661	-66 10 16.70	0.18	3	69.256				18666
2298	+ 0	414	8.6	K0	2 28 41.862	0.01	2	71.204	+ 1 17 40.69	0.29	2	71.204				4476
2299	-48	657	8.7	K0	28 48.581	0.10	4	70.326	-48 09 08.40	0.08	4	70.326				295
2300	+ 1	438	5.44	K0	28 54.762	0.22	6	70.577	+ 2 02 47.71	0.15	6	70.577				32173
2301	+ 2	393	7.9	G5	28 55.468	0.15	2	71.346	+ 3 13 10.81	0.31	2	71.346				4478
2302f	+ 0	415	6.75	A2	28 55.479	0.27	2	71.303	+ 0 52 25.54	0.31	2	71.303				4477
2303	-69	127	7.68	K5	2 29 04.282	0.07	4	69.307	-68 49 55.39	0.10	4	69.307				18667
2304	- 4	412	8.3	A5	29 05.781	0.02	2	71.833	- 4 12 00.94	0.14	2	71.833				4479
2305	-46	743	7.80	K0	29 07.348	0.05	4	70.305	-45 53 21.34	0.28	4	70.305				296
2306	-47	764	8.6	K0	29 10.604	0.13	4	70.281	-47 39 44.84	0.22	4	70.281				297
2307	-32	914	8.1	K0	29 24.080	0.16	4	71.026	-32 15 57.38	0.19	4	71.026				4480
2308	- 1	352	8.1	K2	2 29 35.776	0.29	3	72.243	- 1 24 54.10	0.14	3	72.243				4481
2309	-54	455	9.5	K0	29 37.914	0.07	4	70.540	-54 27 45.52	0.20	4	70.540				4482
2310	-63	163	7.64	G5	29 41.334	0.16	4	69.772	-62 48 59.57	0.13	4	69.772				4483
2311	-76	204	8.7	K0	29 42.693	0.12	5	70.263	-76 02 15.96	0.19	5	70.263				18668
2311	SP				29 42.540	0.36	3	70.014	-76 02 15.35	0.12	3	70.014				18668

2243 9.2m-9.6m, 0°5, 25°.

2252 A 1890, 9.2m-10.5m, 0°7, 38°.

2257 SDS, 8.2m-8.6m, 1°0, 211°.

2302 A 1924, 7.3m, 13°5, 220°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
2312	-15	449	4.82	F5	2 29 42.855	0.02	118	70.909	-15 27 49.96	0.03	118	70.909	1071	3045	513	81071
2313	-52	312	8.3	K2	29 45.228	0.16	4	70.031	-52 02 35.19	0.15	4	70.031				4484
2314	-37	953	9.1	K2	29 49.422	0.08	4	70.885	-37 08 46.52	0.02	4	70.885				4485
2315	-7	447	8.5	F2	29 50.503	0.04	2	71.752	-7 23 22.06	0.27	2	71.752				4486
2316	-57	454	8.4	K0	30 02.465	0.02	4	70.522	-56 49 17.47	0.19	4	70.522				4487
2317	+14	419	6.07	F5	2 30 09.489	0.07	7	70.659	+14 48 52.33	0.08	6	70.616	2176	3055		32176
2318	-23	962	8.7	G5	30 09.857	0.14	4	69.718	-23 32 58.33	0.13	4	69.718				4488
2319	-51	604	9.9	G5	30 14.916	0.14	4	70.552	-51 14 46.50	0.22	4	70.552				298
2320	-12	478	7.4	K0	30 24.008	--	1	70.757	-11 37 58.83	0.26	2	71.829				4489
2321	+1	440	8.8	K2	30 24.306	--	1	71.986	+1 26 40.85	--	1	71.986				4490
2322	-9	478	8.5	F5	2 30 27.939	--	1	71.787	-8 55 11.66	--	1	71.787				4491
2323	-59	216	8.1	K0	30 33.431	0.07	4	71.009	-59 20 22.23	0.11	3	71.053				4492
2324	-16	460	8.1	K0	30 41.916	--	1	71.779	-16 15 30.75	--	1	71.779				4493
2325	-19	473	8.7	G5	30 47.884	--	1	71.891	-18 34 29.15	--	1	71.891				4494
2326	-39	741	8.7	K0	30 47.897	0.12	4	70.605	-38 48 12.36	0.11	4	70.605				4495
2327	-79	65	8.6	K0	2 30 59.608	0.07	4	70.336	-78 42 40.33	0.15	4	70.336				18669
2327	SP				30 59.501	0.09	4	70.764	-78 42 39.83	0.37	4	70.764				18669
2328	-63	167	8.3	G5	31 00.226	0.13	5	70.319	-63 13 31.39	0.16	5	70.319				4496
2329	-35	877	5.88	K0	31 01.867	0.04	65	71.077	-34 52 09.19	0.04	65	71.077	88	3067	516	30088
2330	-39	743	8.8	F8	31 03.499	0.14	4	70.495	-39 33 42.48	0.04	4	70.495				4497
2331	-26	915	7.5	K2	2 31 03.802	0.09	4	70.828	-26 30 37.05	0.06	4	70.828				4498
2332	+3	354	8.5	G5	31 09.350	0.27	2	71.836	+3 32 27.98	0.45	2	71.836				4499
2333	-45	809	8.3	K2	31 09.890	0.11	4	70.348	-45 01 44.10	0.14	4	70.348				299
2334	-6	501	8.3	M0	31 23.373	0.04	2	71.351	-6 13 28.88	0.29	2	71.351				4500
2335	-33	866	7.65	K0	31 29.751	0.13	4	70.314	-33 02 43.36	0.20	4	70.314		3077		4501
2336	-25	1003	8.3	K2	2 31 34.266	0.11	4	70.047	-25 17 48.73	0.18	4	70.047				4502
2337	-14	478	8.2	G5	31 38.194	0.11	2	70.445	-14 23 16.82	0.28	2	70.445				4503
2338	-29	928	8.0	K0	31 42.810	0.15	4	69.814	-29 38 41.13	0.07	4	69.814				4504
2339	-20	482	8.6	F0	31 45.835	0.12	3	70.566	-20 13 22.17	0.20	3	70.566				4505
2340	-19	477	8.7	K0	32 05.447	0.04	2	71.321	-19 26 08.38	0.31	2	71.321				4506
2341	-3	404	8.7	M0	2 32 08.818	0.23	2	71.327	-3 00 45.46	0.38	2	71.327				4507
2342	-51	611	6.29	F5	32 12.342	0.15	6	69.501	-51 18 43.21	0.07	6	69.501	2177	3090	518	32177
2343	-31	1040	9.2	K0	32 14.264	0.13	4	70.603	-30 55 00.54	0.16	4	70.603				4508
2344	+2	400	8.3	G5	32 15.169	0.06	2	71.848	+2 26 03.88	0.07	2	71.848				4509
2345	-38	855	9.0	G5	32 15.251	0.16	4	70.334	-37 43 13.02	0.26	4	70.334				4510
2346	+0	430	8.8	K0	2 32 18.415	0.00	2	72.259	+1 01 36.45	0.00	2	72.259				4511
2347	-22	444	7.12	K0	32 18.956	0.10	4	70.280	-22 08 53.00	0.16	4	70.280		3092		4512
2348	-0	387	8.4	K0	32 20.297	0.16	3	72.315	-0 35 18.64	0.49	3	72.315				4513
2349	-34	939	8.5	F8	32 20.583	0.09	4	70.581	-34 03 56.35	0.08	4	70.581				4514
2350	-66	149	9.1	G5	32 22.301	0.13	4	70.017	-65 51 31.01	0.26	4	70.017				18670
2351	-23	972	8.5	K0	2 32 23.080	0.15	4	70.764	-23 21 41.44	0.13	4	70.764				4515
2352	-31	1042	9.2	G0	32 29.678	0.12	4	70.711	-31 31 54.38	0.14	4	70.711				4516
2353	+3	359	8.0	G0	32 33.459	0.04	2	71.839	+3 54 23.25	0.21	2	71.839		3099		4517
2354	-33	874	8.6	K2	32 33.953	0.09	4	70.320	-32 41 12.90	0.10	4	70.320				4518
2355	-10	512	8.6	K0	32 35.984	0.29	2	72.250	-10 06 23.53	0.29	2	72.250				4519
2356	-79	66	5.29	K0	2 32 41.727	0.05	50	70.500	-79 19 41.91	0.05	50	70.500	90	3102	519	30090
2356	SP				32 41.753	0.06	35	70.890	-79 19 41.80	0.09	34	70.879	90	3102	519	50090
2357	-17	498	7.9	A0	32 43.426	0.02	2	71.799	-17 30 27.50	0.27	2	71.799				4520
2358	-72	190	8.17	G0	32 44.538	0.16	4	69.948	-72 39 47.23	0.11	4	69.948		3104		18671
2359	-69	130	9.0	K0	32 45.262	0.11	4	70.255	-69 25 04.14	0.26	3	70.049				18672
2360	-4	426	6.78	G0	2 32 49.131	0.12	2	71.751	-3 46 30.36	0.01	2	71.751		3106		4521
2361	-65	186	8.4	K2	32 55.829	0.07	4	69.759	-64 42 36.75	0.07	4	69.759				18673
2362	-40	664	9.6	K0	33 08.171	0.14	4	70.021	-40 12 45.95	0.03	4	70.021				300
2363	-28	826	8.4	G5	33 10.113	0.03	3	69.786	-28 15 22.70	0.23	3	69.786				4522
2364p	+4	418	5.04	G5	33 14.772	0.03	46	71.602	+5 22 33.50	0.04	45	71.617	1072	3117	522	31072
2365	-15	458	6.89	K0	2 33 15.954	0.04	2	71.780	-15 09 43.60	0.10	2	71.780		3118		4523
2366	-2	444	8.3	K0	33 17.258	0.15	2	72.167	-2 02 52.96	0.35	2	72.167				4524
2367	-57	458	9.2	K0	33 19.321	0.07	4	69.562	-57 12 13.26	0.14	4	69.562				4525
2368	-12	488	8.5	G5	33 20.916	0.06	2	71.866	-12 14 40.48	0.01	2	71.866				4526
2369	-71	144	7.8	M1	33 21.145	0.12	4	69.326	-70 59 11.01	0.15	4	69.326				18674
2370	+6	398	5.92	K0	2 33 22.740	0.07	15	71.658	+6 39 29.51	0.07	15	71.658	1073	3121	523	31073
2371	-27	900	8.5	F5	33 31.532	0.11	4	70.297	-26 54 50.83	0.09	4	70.297				4527
2372	-8	489	5.71	K5	33 32.183	0.04	38	71.465	-8 02 54.28	0.04	38	71.465	1074	3126	525	31074
2373	-66	151	8.8	K0	33 35.731	0.07	4	70.313	-66 00 32.10	0.15	4	70.313				18675
2374	-58	220	9.1	K0	33 41.165	0.27	5	69.938	-58 08 41.76	0.46	5	69.938				4528
2375	-51	616	7.09	G5	2 33 49.144	0.10	4	69.153	-51 04 14.56	0.07	4	69.153		3131		301
2376	-50	760	8.6	F2	33 53.443	0.09	4	69.844	-49 46 54.50	0.09	4	69.844				302
2377	+11	360	5.68	F5	33 54.441	0.06	6	70.563	+12 13 53.18	0.16	6	70.563	2179	3133		32179
2378	-21	459	8.2	K0	34 00.028	0.11	4	70.122	-21 34 44.72	0.17	4	70.122				4529
2379	-53	451	8.8	G5	34 00.475	0.11	4	69.317	-53 05 37.16	0.09	4	69.317				4530
2380	-79	68	8.03	K0	2 34 04.623	0.06	4	69.388	-79 15 15.57	0.03	3	68.915		3138		18676
2380	SP				34 04.600	0.12	4	69.860	-79 15 15.29	0.29	4	69.860		3138		18676
2381	-20	490	8.8	G5	34 05.246	0.18	2	71.915	-20 01 21.90	0.31	2	71.915				4531
2382	-48	700	8.6	K0	34 11.755	0.06	4	69.881	-48 38 24.45	0.05	4	69.881				303
2383	-24	1157	7.56	K0	34 14.320	0.15	4	69.531	-24 08 09.21	0.10	4	69.531		3144	527	4532

2364 A 1971, 9.6m, 8°, 83°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
2384	-46	765	8.5	G0	2 34 18.205	0.16	4	70.280	-46 28 16.96	0.24	4	70.280				304
2385	-20	492	7.08	K0	34 31.955	0.16	4	69.127	-20 20 17.61	0.16	4	69.127		3148		4533
2386	-36	991	7.4	M0	34 42.823	0.05	4	70.099	-36 02 42.60	0.17	4	70.099				4534
2387	-43	795	9.4	K0	34 43.688	0.20	4	70.565	-43 29 56.64	0.19	4	70.565				305
2388	-35	902	7.53	K0	34 49.432	0.22	4	70.466	-35 32 11.18	0.09	4	70.466		3152		4535
2389	-29	951	7.17	G0	2 34 54.670	0.18	3	69.487	-29 12 34.48	0.03	3	69.487		3154		4536
2390	-5	491	8.6	F5	35 01.560	0.14	2	71.265	-5 18 21.58	--	1	71.656				4537
2391	-33	894	8.9	G5	35 03.750	0.10	4	70.348	-33 07 20.22	0.06	4	70.348				4538
2392	-23	995	8.7	G0	35 04.829	0.11	3	69.427	-22 56 30.76	0.07	3	69.427				4539
2393	-4	436	5.84	K0	35 10.553	0.07	6	69.401	-3 36 42.66	0.14	6	69.401	2180	3158		32180
2394	-34	952	8.8	K0	2 35 15.331	0.12	4	70.781	-33 51 55.68	0.20	4	70.781				4540
2395	-13	495	7.7	F8	35 26.810	0.14	2	71.247	-13 20 45.31	0.34	2	71.247				4541
2396	-23	998	6.89	G5	35 28.658	0.08	6	68.794	-23 12 29.35	0.11	6	68.794	2181	3163		4542
2397	-35	909	8.9	K2	35 39.923	0.14	4	70.573	-34 45 15.21	0.08	4	70.573				4543
2398	-17	507	8.6	K0	35 42.829	0.37	2	70.757	-17 22 18.45	0.13	2	70.757				4544
2399	-47	806	8.9	G0	2 35 44.275	0.02	4	70.708	-47 36 28.80	0.10	4	70.708				306
2400	-12	496	8.5	G0	35 44.900	0.06	2	71.275	-11 36 02.10	0.14	2	71.275				4545
2401	-53	457	5.26	A5	35 45.526	0.16	6	69.928	-52 45 32.33	0.07	6	69.928	2182	3166	529	32182
2402	+21	362	5.36	A2	35 58.264	0.04	24	71.985	+21 44 46.44	0.09	23	72.032	89	3167	530	30089
2403	-39	764	9.3	K0	35 58.269	0.16	4	70.598	-38 59 04.78	0.17	4	70.598				4546
2404*	+2	406	6.37	G5	2 36 00.513	0.06	2	71.247	+3 13 40.26	0.05	2	71.247		3168		4547
2405	-8	498	8.6	F0	36 07.997	0.16	2	71.266	-7 44 43.54	0.07	2	71.266				4548
2406	-30	973	5.79	F5	36 09.404	0.10	6	70.001	-30 24 32.13	0.10	6	70.001	2183	3170		32183
2407	-32	968	9.1	F8	36 16.984	0.21	4	71.246	-32 16 45.56	0.37	4	71.246				4549
2408	-42	876	7.33	K0	36 19.023	0.09	4	70.552	-41 46 07.42	0.22	4	70.552		3174		307
2409	-41	745	10.2	G5	2 36 23.380	0.11	4	70.613	-41 22 37.16	0.17	4	70.613				308
2410	-38	875	6.47	F5	36 23.993	0.09	6	69.618	-38 12 19.33	0.14	6	69.618	2184	3176		32184
2411	-3	415	8.5	G5	36 26.813	0.04	2	71.294	-2 48 03.73	0.01	2	71.294				4550
2412	-71	149	8.6	K0	36 30.046	0.13	4	69.302	-71 21 43.45	0.08	4	69.302				18677
2413	-13	500	8.7	F8	36 30.992	0.14	2	71.333	-13 13 03.40	0.41	2	71.333				4551
2414	-9	497	7.11	G0	2 36 33.285	0.13	2	71.336	-9 08 33.07	0.04	2	71.336		3177		4552
2415	-31	1072	7.55	K0	36 37.678	0.12	3	69.315	-30 48 52.48	0.28	3	69.315				4553
2416	-45	844	7.95	G5	36 39.434	0.23	2	69.835	-44 55 21.84	0.08	2	69.835		3180		309
2417	-10	522	6.74	G5	36 42.686	0.02	2	71.350	-10 02 45.18	0.41	2	71.350		3183		4554
2418	-52	324	9.4	G8	36 44.528	0.06	4	69.054	-52 33 42.30	0.05	4	69.054				4555
2419	-15	466	8.8	K0	2 36 47.304	0.04	2	71.818	-15 12 28.54	0.16	2	71.818				4556
2420	-44	802	8.1	K0	36 52.315	0.09	4	70.135	-44 22 10.62	0.08	4	70.135				310
2421	-0	406	4.04	B2	36 55.013	0.05	28	71.652	+0 06 49.94	0.09	28	71.652	91	3192	534	30091
2422	+0	442	8.5	B9	37 00.045	0.09	2	71.809	+1 09 14.81	0.39	2	71.809				4557
2423	-14	497	8.06	G0	37 00.871	0.16	2	71.831	-14 30 08.64	0.34	2	71.831		3195		4558
2424	+3	371	8.8	F5	2 37 10.757	--	1	72.730	+4 12 23.53	--	1	72.730				4559
2425	+1	462	8.7	K5	37 11.044	0.04	2	72.278	+1 54 57.41	0.22	2	72.278				4560
2426	-26	958	7.79	K0	37 12.802	0.25	4	68.815	-25 47 01.18	0.08	4	68.815		3200		4561
2427	-61	216	8.08	M0	37 16.845	0.10	4	69.045	-61 35 42.89	0.05	4	69.045		3202		4562
2428*	-0	407	8.1	G0	37 17.874	0.09	2	72.300	-0 04 00.34	0.20	2	72.300		3203		4563
2429	-37	992	8.6	G5	2 37 21.562	0.14	4	70.590	-37 08 57.60	0.09	4	70.590				4565
2430	-19	498	8.8	F8	37 21.580	--	1	72.790	-19 12 07.82	--	1	72.790				4564
2431	-53	464	8.0	K0	37 27.944	0.05	4	69.956	-53 21 48.94	0.09	4	69.956				4567
2432	-9	500	8.7	K0	37 30.585	--	1	71.981	-9 04 56.67	--	1	71.981				4568
2433	-0	408	8.5	G5	37 38.396	0.07	2	70.768	-0 28 50.94	0.02	2	70.768				4569
2434	-16	483	8.0	G5	2 37 39.420	0.12	2	71.249	-16 18 41.69	0.17	2	71.249				4570
2435	-49	731	7.83	K5	37 40.773	0.04	4	70.832	-49 21 46.03	0.11	4	70.832		3212		311
2436	-68	160	9.0	K0	37 42.969	0.11	4	69.747	-67 45 32.89	0.19	3	69.747				18678
2437	-35	920	7.34	K0	37 43.190	0.13	4	70.959	-35 14 19.29	0.09	4	70.959		3214		4571
2438	-36	1007	8.5	K0	37 44.680	0.05	4	70.730	-35 43 36.75	0.15	4	70.730				4572
2439	-40	687	8.6	K2	2 37 47.306	0.07	4	70.516	-40 12 54.63	0.14	4	70.516				312
2440	-43	814	4.53	A2	37 53.740	0.16	6	69.929	-43 06 20.29	0.08	6	69.929	2185	3217		32185
2441	-45	849	8.9	K0	37 56.688	0.09	4	70.568	-44 41 43.27	0.15	4	70.568				313
2442	-61	217	7.50	K0	37 58.934	0.17	4	70.027	-60 45 42.12	0.16	4	70.027		3220		4573
2443	-73	185	8.2	F2	38 03.620	0.12	4	70.271	-73 04 52.58	0.12	4	70.271				18679
2444*	-54	464	8.8	G5	2 38 04.199	0.15	5	71.406	-54 37 51.27	0.14	5	71.406				4574
2445	-88	27	8.35	G5	38 06.255	0.08	17	70.987	-88 22 04.73	0.12	17	70.987	1657	3223	538	31657
2445 SP					38 05.961	0.04	68	71.402	-88 22 04.67	0.05	64	71.398	1657	3223	538	51657
2446	-2	469	8.3	K0	38 08.848	0.10	2	72.218	-2 08 18.95	0.08	2	72.218				4577
2447	+2	412	7.7	G5	38 11.413	0.14	2	71.977	+2 41 04.80	0.20	2	71.977				4578
2448	+2	413	9.1	K2	2 38 15.766	--	1	71.645	+3 01 08.51	--	1	71.645				4579
2449	-80	54	7.74	G5	38 16.531	0.08	4	68.817	-80 01 44.88	0.12	4	68.817		3224		18681
2449 SP					38 16.456	0.08	4	70.321	-80 01 45.01	0.08	4	70.321		3224		18681
2450	-60	205	7.4	K0	38 19.067	0.13	4	71.108	-59 46 53.98	0.08	4	71.108		3226		4580
2451	-32	977	7.51	F5	38 23.120	0.06	4	69.013	-31 40 52.12	0.11	4	69.013		3228		4581
2452	-37	1003	7.7	K0	2 38 29.827	0.13	4	70.577	-36 42 27.35	0.07	4	70.577				4582
2453	-8	506	8.7	K2	38 35.832	0.18	2	71.275	-8 05 24.32	0.40	2	71.275				4583
2454	-58	224	7.6	M1	38 35.837	0.04	4	71.131	-57 52 53.81	0.05	4	71.131				4584
2455	-22	461	8.4	K0	38 39.573	0.13	3	69.497	-22 08 08.07	0.14	3	69.497				4585
2456	-40	689	4.06	K0	38 41.868	0.04	38	71.327	-40 04 07.57	0.04	37	71.338	1075	3237	539	31075

2404 6.5m-9.7m, 0°8, 312°.
2428 A 2028, 9.0m-9.0m, 0°1.

2444 SDS, 9.3m-10.0m, 0°6, 78°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
2457	-19°	504	8.7	K2	2 38 44.302	0.31	2	71.861	-18 48 56.49	0.12	2	71.861				4586
2458	+ 3	373	6.88	A0	38 44.587	--	1	70.962	+ 4 12 54.23	--	1	70.962		3239		4587
2459	-10	530	8.6	G0	38 48.323	--	1	71.902	- 9 58 36.30	--	1	71.902				4588
2460	-62	216	7.9	K0	38 48.379	0.06	4	71.317	-62 21 59.77	0.13	4	71.317				4589
2461	-68	161	4.26	B9	38 49.045	0.03	52	70.954	-68 28 51.33	0.07	51	70.993	95	3240	541	30095
2462	-18	457	7.9	K0	2 38 52.602	--	1	71.863	-18 02 03.61	--	1	71.863				4590
2463	-25	1062	8.4	K2	38 53.916	0.17	4	69.133	-24 42 33.22	0.12	4	69.133				4591
2464	-41	760	7.74	K5	38 55.888	0.12	4	70.579	-41 30 47.86	0.11	4	70.579		3242		314
2465	- 0	410	6.83	G5	38 56.175	0.02	2	71.339	+ 0 19 58.82	0.02	2	71.339		3243		4592
2466	-55	446	5.26	F2	39 06.256	0.05	38	71.053	-54 45 48.17	0.06	36	71.064	1076	3246	543	31076
2467	-17	519	8.8	A2	2 39 06.943	0.12	3	72.101	-16 59 47.32	0.11	3	72.101				4593
2468	-15	478	6.05	F5	39 11.651	0.07	2	71.391	-14 45 45.48	0.07	2	71.391		3247		4594
2469	-42	894	8.8	K2	39 12.046	0.12	4	71.008	-42 14 58.40	0.15	4	71.008				315
2470	-28	863	8.0	G0	39 20.763	0.17	4	69.519	-27 43 45.24	0.10	4	69.519				4595
2471	- 0	411	8.0	F0	39 24.878	0.21	2	72.197	+ 0 20 14.80	0.22	2	72.197				4596
2472	-23	1029	8.0	M5	2 39 41.710	0.11	3	70.427	-22 49 06.73	0.16	3	70.427				4597
2473	-70	173	8.3	G5	39 50.697	0.13	4	70.024	-70 07 54.67	0.23	4	70.024				18682
2474	-47	829	8.0	K0	39 54.426	0.10	4	70.532	-47 20 30.28	0.09	4	70.532				316
2475	-69	137	8.4	G5	39 57.026	0.39	4	69.985	-69 17 46.51	0.06	4	69.985				18683
2476	-38	893	8.6	K5	39 58.044	0.08	4	70.827	-38 19 12.92	0.05	4	70.827				4598
2477	-55	451	9.0	G5	2 40 02.542	0.13	4	70.344	-55 05 01.65	0.18	4	70.344				4599
2478	-50	792	9.4	K	40 04.184	0.11	4	70.974	-49 47 15.61	0.12	4	70.974				317
2479	-11	507	8.7	K0	40 04.814	0.07	2	71.314	-11 00 20.17	0.25	2	71.314				4600
2480	-29	986	8.48	F5	40 11.141	0.08	4	70.308	-28 47 14.44	0.12	4	70.308		3265		4601
2481	-82	47	8.6	K0	40 14.434	0.13	4	69.600	-81 40 53.88	0.12	4	69.600				18684
2481 SP					2 40 14.451	0.08	4	70.818	-81 40 53.63	0.13	4	70.818				18684
2482	-47	832	6.19	G5	40 20.396	0.10	6	69.105	-46 44 09.62	0.07	6	69.105	2189	3269	546	32189
2483	-21	481	8.4	G5	40 20.437	0.27	4	69.609	-20 45 00.98	0.14	4	69.609				4602
2484	-49	745	9.4	--	40 29.719	0.20	5	70.975	-49 18 49.27	0.17	5	70.975				318
2485	+27	424	4.58	B3	40 30.667	0.03	85	71.178	+27 29 43.81	0.05	85	71.178	94	3273	549	80094
2486	- 0	414	8.8	M0	2 40 43.373	0.11	2	70.440	- 0 07 28.02	--	1	70.006				4603
2487	+ 1	474	8.3	M0	40 43.498	0.05	2	71.302	+ 1 31 06.51	0.21	2	71.302				4604
2488	-60	209	8.6	K0	40 50.270	0.17	4	68.937	-60 16 36.19	0.06	4	68.937				4605
2489	-74	226	8.20	K0	40 52.315	0.18	4	69.387	-74 32 11.95	0.27	4	69.387		3280		18685
2490	- 3	426	6.64	K0	40 57.098	0.19	2	71.273	- 2 44 34.81	0.14	2	71.273		3283	556	4606
2491	-57	464	7.97	K0	2 41 03.424	0.17	4	68.985	-56 51 07.94	0.06	4	68.985		3286		4607
2492	- 0	415	8.4	G0	41 03.636	0.13	2	71.363	- 0 33 20.80	0.18	2	71.363				4608
2493	-27	957	8.5	A3	41 10.984	0.16	4	69.970	-26 43 24.52	0.02	4	69.970				4609
2494	+ 2	425	8.4	G5	41 14.037	0.02	2	71.325	+ 2 36 21.41	0.29	2	71.325		3289		4610
2495	-12	515	8.4	K0	41 18.569	0.13	2	71.344	-12 06 31.70	0.34	2	71.344				4611
2496	-34	985	7.2	K0	2 41 19.905	0.07	4	70.306	-34 18 10.83	0.08	4	70.306				4612
2497	-38	899	8.1	G5	41 25.626	0.08	4	70.576	-38 08 21.77	0.10	4	70.576				4613
2498	- 8	515	6.64	K0	41 27.916	0.24	2	70.824	- 8 07 23.44	0.29	2	70.824		3291		4614
2499	-85	33	7.29	K0	41 28.681	0.18	5	70.404	-85 13 52.96	0.07	5	70.404		3292		18686
2499 SP					41 28.829	0.15	5	70.681	-85 13 53.01	0.34	4	70.736		3292		18686
2500	+17	426	6.47	K0	2 41 31.400	0.10	7	70.522	+17 33 11.88	0.19	6	70.455	2190	3294		32190
2501	- 6	525	8.3	K2	41 31.473	0.08	2	71.820	- 6 33 24.42	0.01	2	71.820				4615
2502	-45	874	7.50	K0	41 32.158	0.12	4	70.885	-44 51 53.96	0.17	4	70.885		3295		319
2503	- 9	514	8.7	G5	41 32.946	0.07	2	71.865	- 9 23 16.14	0.24	2	71.865				4616
2504	-16	495	8.8	K5	41 36.928	0.09	2	71.971	-15 59 47.74	0.29	2	71.971				4617
2505	-54	468	8.9	K0	2 41 39.228	0.11	4	68.819	-54 19 24.64	0.08	4	68.819				4618
2506	-14	519	4.39	B5	41 44.462	0.04	30	71.626	-14 04 10.47	0.06	29	71.651	97	3300	557	30097
2507	-13	516	8.0	K0	41 46.295	0.09	2	71.888	-12 42 09.58	0.10	2	71.888				4619
2508*	-31	1106	9.3	F8	41 47.223	0.13	4	70.301	-31 16 26.35	0.12	4	70.301				4620
2509	- 5	509	8.5	K5	41 51.540	0.10	2	71.973	- 4 43 52.16	0.14	2	71.973				4621
2510	-33	942	7.8	G5	2 41 55.233	0.18	4	70.536	-33 22 58.32	0.08	4	70.536				4622
2511	- 0	420	9.0	F0	41 57.344	0.03	2	72.166	+ 0 09 52.09	0.14	2	72.166				4623
2512	-43	830	9.2	K0	42 01.086	0.07	4	70.713	-43 00 13.57	0.12	4	70.713				320
2513	-40	709	8.9	K2	42 01.310	0.10	4	70.790	-40 29 15.84	0.15	4	70.790				321
2514f	-26	996	6.87	G0	42 01.429	0.04	25	70.373	-25 42 23.86	0.07	25	70.373	1078	3305	558	31078
2515	-75	200	9.0	K2	2 42 05.987	0.22	4	69.604	-75 26 59.37	0.31	4	69.604				18687
2515 SP					42 05.818	0.50	4	69.813	-75 26 59.44	0.30	4	69.813				18687
2516	- 1	388	8.0	K0	42 09.755	0.13	2	71.265	- 1 03 23.90	0.89	2	71.265				4624
2517	-36	1033	7.15	G0	42 11.336	0.13	4	70.104	-36 31 05.17	0.10	4	70.104		3307		4625
2518	+ 9	359	4.36	F0	42 14.528	0.07	15	71.971	+ 9 54 14.26	0.10	15	71.971	98	3309	559	30098
2519	-24	1225	8.1	G5	2 42 15.212	0.04	4	69.864	-24 37 26.94	0.18	4	69.864				4626
2520	-63	179	7.42	G0	42 27.540	0.07	4	68.833	-63 07 47.39	0.15	4	68.833		3312		4627
2521	-18	465	8.7	F8	42 38.662	0.05	2	71.369	-17 59 29.19	0.15	2	71.369				4628
2522	+ 4	437	6.02	F0	42 43.469	0.04	2	71.317	+ 4 30 07.07	0.41	2	71.317		3315		4629
2523	-52	332	9.4	--	42 45.555	0.21	5	70.517	-51 45 48.44	0.14	5	70.517				322
2524	-16	498	7.54	G5	2 42 50.839	0.02	2	70.437	-15 38 13.52	0.09	2	70.437			563	4630
2525	-41	778	9.3	G5	43 12.912	0.05	4	69.840	-40 52 29.18	0.05	4	69.840				323
2526	-68	167	8.6	G0	43 20.099	0.12	4	69.974	-68 21 29.64	0.11	3	69.673				18688
2527	-30	1027	8.9	K5	43 26.052	0.06	4	69.781	-30 05 24.84	0.12	4	69.781				4631
2528	-46	797	6.80	K0	43 28.957	0.15	4	69.663	-46 29 48.48	0.09	4	69.663		3326		324

2508 SDS, 9.6m-11.0m, 1°8, 36°.

2514 A 2098, 9.0m, 12°, 192°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
2529	-53	478	9.0	G0	2 43 38.448	0.23	4	69.575	-52 55' 25.92	0.18	4	69.575				4632
2530	-29	1008	8.5	K0	43 44.135	0.06	4	70.231	-28 52 36.05	0.07	4	70.231				4633
2531	-24	1234	8.9	F2	43 47.460	0.14	4	70.316	-23 48 05.78	0.11	4	70.316				4634
2532	-25	1099	7.44	K0	43 55.269	0.14	4	69.803	-25 32 36.86	0.16	4	69.803		3336		4635
2533	-31	1119	9.5	K0	43 55.299	0.13	4	71.041	-30 44 01.76	0.28	4	71.041				4636
2534	-58	230	8.9	K0	2 43 56.231	0.15	4	69.258	-58 38 32.81	0.15	4	69.258				4637
2535	-1	391	8.5	K0	44 00.096	0.08	2	71.256	-1 35 36.16	0.22	2	71.256				4638
2536	-56	457	9.1	K0	44 03.154	0.13	4	70.486	-55 45 11.82	0.18	4	70.486				4639
2537	-26	1013	8.6	G5	44 03.220	0.25	4	69.984	-26 22 49.92	0.12	4	69.984				4640
2538	-10	546	8.9	K0	44 03.786	0.30	2	71.294	-10 01 04.72	0.02	2	71.294				4641
2539	-22	477	7.10	F0	2 44 09.778	0.21	3	70.190	-21 52 13.62	0.11	3	70.190		3340		4642
2540	-19	521	9.0	F0	44 10.017	0.13	2	71.339	-19 06 16.39	0.23	2	71.339				4643
2541	-14	527	8.8	G5	44 12.631	0.44	2	70.833	-14 10 57.10	0.13	2	70.833				4644
2542	-7	490	8.8	K0	44 14.933	0.03	2	71.228	-7 12 07.27	0.20	2	71.228				4645
2543	-80	59	8.6	K0	44 21.880	0.09	4	70.058	-80 13 21.52	0.18	4	70.058				18689
2543 SP					2 44 21.822	0.06	5	69.941	-80 13 21.18	0.25	4	69.810				18689
2544	-59	232	8.6	K5	44 34.524	0.10	3	68.926	-59 36 12.93	0.30	3	68.926				4646
2545	-68	169	4.90	A2	44 46.105	0.09	6	69.544	-67 49 34.32	0.06	6	69.544	2191	3354	571	32191
2546*	-15	493	8.3	*	44 47.743	0.18	3	70.785	-15 35 09.24	0.33	2	70.741				4647
2547	-63	184	9.0	M0	44 52.186	0.10	4	69.105	-63 16 47.35	0.07	4	69.105				4648
2548	+ 2	430	8.9	K5	2 44 52.462	0.22	2	71.256	+ 3 06 45.86	0.10	2	71.256				4649
2549	-43	846	8.6	K0	44 52.687	0.07	4	69.986	-43 12 48.39	0.09	4	69.986				325
2550	-3	437	8.5	G0	44 54.246	0.28	2	71.276	-3 30 18.64	0.44	2	71.276				4650
2551	-37	1043	7.95	K5	44 57.100	0.13	4	70.076	-37 33 14.96	0.16	4	70.076		3358		4651
2552	-9	529	8.3	K0	45 02.145	0.09	2	70.831	-9 12 12.83	0.10	2	70.831				4652
2553	-66	160	9.1	K0	2 45 03.051	0.12	4	69.210	-66 31 36.82	0.27	4	69.210				18690
2554	+ 0	460	9.0	K2	45 03.489	0.07	2	70.448	+ 0 27 30.13	0.26	2	70.448				4653
2555	-67	185	8.9	G0	45 04.112	0.14	4	69.570	-67 34 41.43	0.10	4	69.570				18691
2556	-34	1009	9.3	F8	45 07.332	0.08	4	70.307	-34 26 43.33	0.15	4	70.307				4654
2557	-71	165	6.84	F2	45 13.555	0.11	6	69.159	-71 26 42.29	0.06	6	69.159	2192	3360		32192
2557 SP					2 45 13.557	0.10	26	71.526	-71 26 42.34	0.21	21	71.518	2192	3360		52192
2558	-35	964	8.9	K5	45 13.684	0.18	4	70.129	-34 59 44.65	0.18	4	70.129				4655
2559	-32	1009	9.5	K	45 17.945	0.09	4	70.330	-32 37 45.26	0.18	4	70.330				4656
2560	-54	473	9.1	K2	45 20.457	0.05	4	69.086	-53 43 29.20	0.10	4	69.086				4657
2561	-13	530	6.4v	M3	45 32.075	0.10	2	70.768	-12 40 05.46	0.24	2	70.768		3366	574	4658
2562	-26	1025	8.0	G5	2 45 46.401	0.11	3	69.193	-26 18 04.53	0.23	3	69.193				4659
2563	-78	70	8.9	K0	45 52.724	0.05	4	69.070	-78 34 58.06	0.04	4	69.070				18692
2563 SP					45 52.642	0.09	4	70.224	-78 34 58.14	0.24	4	70.224				18692
2564	-5	521	8.3	G0	45 52.742	0.01	2	71.265	-5 07 41.30	0.38	2	71.265				4660
2565	-48	757	8.5	K0	46 07.218	0.14	4	70.654	-48 07 18.86	0.18	4	70.654				326
2566	-40	724	8.7	G5	2 46 08.887	0.21	4	70.746	-40 00 40.47	0.19	4	70.746				327
2567	-48	761	8.7	K2	46 15.586	0.10	4	70.989	-48 19 43.34	0.16	4	70.989				328
2568	-17	540	7.9	G5	46 19.562	0.21	2	71.257	-17 01 07.57	0.28	2	71.257				4661
2569	+ 3	387	8.4	A0	46 21.256	0.26	2	71.307	+ 3 52 22.60	0.10	2	71.307				4662
2570*	-45	906	9.1	G5	46 22.955	0.15	4	70.979	-45 32 01.41	0.07	4	70.979				329
2571	-4	476	7.14	K5	2 46 32.229	0.14	2	71.247	-4 25 54.36	0.16	2	71.247		3379		4663
2572*	-19	533	8.3	M3	46 35.443	0.16	2	70.747	-19 14 03.54	-	1	70.620				4664
2573	-72	203	8.7	K0	46 41.867	0.08	4	68.996	-71 51 18.02	0.10	4	68.996				18693
2574	-25	1114	7.9	G5	46 42.602	0.08	3	69.206	-24 49 00.32	0.13	3	69.206				4665
2575	-51	664	9.2	F0	46 47.845	0.12	4	69.024	-51 14 53.81	0.22	4	69.024				330
2576	-32	1023	9.1	F8	2 46 47.889	0.14	4	69.270	-31 46 21.36	0.11	4	69.270				4666
2577	-38	927	9.0	F5	46 59.716	0.11	4	71.103	-38 41 10.55	0.10	4	71.103				4667
2578	-32	1025	4.50	K0	46 59.968	0.02	114	71.220	-32 36 50.70	0.03	113	71.223	101	3387	576	30101
2579	-44	852	9.7	A0	47 00.119	0.13	4	70.922	-44 05 54.82	0.09	4	70.922				331
2580	-76	217	7.60	K0	47 00.226	0.14	4	69.096	-76 24 06.78	0.14	4	69.096		3386		18694
2580 SP					2 47 00.231	0.20	4	69.760	-76 24 06.42	0.19	4	69.760				18694
2581	+ 26	471	3.68	B8	47 02.162	0.20	3	69.805	+ 27 03 18.61	0.40	3	69.805				30100
2582	+ 0	469	7.08	G5	47 03.460	0.15	4	71.337	+ 0 42 52.38	0.13	4	71.337	2193	3392	579	4668
2583	-46	817	7.99	F5	47 05.555	0.21	4	70.624	-46 33 14.34	0.18	4	70.624		3394		332
2584	-10	558	8.6	F8	47 10.943	0.26	2	71.338	-9 43 55.87	0.30	2	71.338				4669
2585	-60	219	9.0	K5	2 47 11.613	0.20	4	69.325	-60 37 18.91	0.14	4	69.325				4670
2586	-22	487	8.4	G5	47 27.203	0.10	4	70.310	-21 55 34.79	0.17	4	70.310				4671
2587	-20	524	7.5	K5	47 30.266	0.05	4	70.624	-20 27 09.02	0.11	4	70.624				4672
2588	-14	541	7.5	K0	47 35.383	0.12	2	71.347	-14 03 09.32	0.01	2	71.347				4673
2589	+ 1	497	8.5	F5	47 46.923	0.04	2	71.475	+ 2 14 16.41	0.61	2	71.475				4674
2590	-58	238	8.3	M0	2 47 47.489	0.22	4	69.142	-58 01 36.80	0.22	4	69.142				4675
2591	-7	505	7.4	K0	47 51.917	0.10	2	71.474	-7 00 44.83	0.16	2	71.474				4676
2592	-37	1058	8.7	K2	47 53.610	0.12	4	70.313	-37 16 25.85	0.15	4	70.313				4677
2593	-63	188	5.39	A0	47 54.914	0.20	6	69.988	-63 00 48.22	0.07	6	69.988	2196	3412	580	32196
2594	-12	531	8.6	G0	47 58.297	0.32	2	72.441	-11 44 17.55	0.13	2	72.441				4678
2595	-65	198	9.1	K0	2 47 58.312	0.04	4	69.532	-65 26 44.21	0.07	4	69.532				18695
2596	-53	482	7.7	M0	48 06.520	0.08	4	69.717	-52 57 52.70	0.15	4	69.717				4679
2597	+ 2	437	8.8	G0	48 16.499	-	1	71.910	+ 3 06 33.30	-	1	71.910				4680
2598	-33	979	9.5	F2	48 20.737	0.21	3	70.642	-33 12 22.44	0.50	3	70.642				4681
2599	+ 1	499	8.8	G5	48 27.078	0.14	2	72.474	+ 1 55 01.31	0.34	2	72.474				4682

2546 A 2129, 8.4m-11.7m, 1°4, 350°.

F5+A3.

2561 6.4m to 7.7m.

2570 8.7m-11.2m, 0°6, 106°.

2572 9.0m-11.0m, 0°4, 236°.

CATALOG OF 23,001 STARS FOR 1950.0

271

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
2600	-42	941	8.1	G0	2 48 32.132	0.20	5	71.616	-42 26 00.16	0.09	5	71.616				333
2601	-39	822	9.0	K2	48 32.910	0.06	4	71.251	-39 30 31.17	0.04	4	71.251				4683
2602	+3	393	8.4	G5	48 36.105	0.16	2	72.482	+4 14 07.00	0.36	2	72.482		3425		4684
2603	-39	823	8.9	K0	48 37.644	0.08	4	71.179	-38 57 03.71	0.13	4	71.179				4685
2604	-16	513	9.0	G0	48 39.527	0.14	2	72.873	-15 42 27.15	0.18	2	72.873				4686
2605	+14	480	5.46	B5	2 48 43.694	0.03	91	70.945	+14 52 37.64	0.04	88	70.949	1079	3427	584	81079
2606	-21	509	4.81	K0	48 46.091	0.03	54	71.193	-21 12 33.26	0.04	54	71.193	102	3429	586	30102
2607	-74	232	6.98	K5	48 46.682	0.01	3	68.444	-74 02 52.89	0.11	3	68.444		3430		18696
2608	-3	453	7.7	A0	48 51.144	0.09	2	71.750	-3 12 09.48	0.14	2	71.750				4687
2609	-29	1048	8.5	G0	48 51.672	0.06	4	70.682	-29 12 28.47	0.14	4	70.682				4688
2610	-1	399	8.7	K0	2 48 53.243	0.30	2	71.958	-1 22 11.44	0.08	2	71.958				4689
2611	-1	398	8.0	F2	48 53.610	0.37	2	71.355	-0 53 35.35	0.28	2	71.355			587	4690
2612	-0	443	8.2	K0	48 55.708	0.06	2	71.336	-0 07 08.23	0.11	2	71.336				4691
2613	-49	779	8.1	G0	49 01.071	0.20	4	70.335	-49 04 43.26	0.11	4	70.335				334
2614*	-64	201	8.7	F8	49 06.131	0.15	4	71.044	-64 13 29.69	0.12	4	71.044				18697
2615	-70	182	8.5	M2	2 49 12.054	0.17	4	70.027	-70 01 03.03	0.13	4	70.027				18698
2616	-37	1067	9.2	G0	49 13.268	0.03	4	70.318	-36 56 25.85	0.14	4	70.318				4692
2617	-30	1072	7.53	F5	49 15.346	0.08	4	70.777	-30 38 31.34	0.15	4	70.777		3438		4693
2618	-28	914	8.3	F0	49 19.062	0.21	4	70.054	-27 50 17.98	0.02	4	70.054				4694
2619	-24	1281	9.2	K2	49 22.219	0.14	4	70.294	-24 23 33.42	0.21	4	70.294				4695
2620	-17	554	8.06	K0	2 49 30.179	0.31	2	70.822	-17 27 21.07	0.03	2	70.822			589	4696
2621	-18	486	8.0	F2	49 40.682	0.16	2	70.460	-18 33 55.65	0.23	2	70.460				4697
2622	-54	485	8.3	A0	49 43.233	0.11	4	70.267	-54 38 51.32	0.07	4	70.267				4698
2623	-57	481	7.37	K5	49 44.398	0.11	4	69.789	-57 23 50.85	0.07	4	69.789		3442		4699
2624	-8	536	8.0	M1	49 47.128	0.22	2	71.379	-8 28 17.20	0.15	2	71.379				4700
2625	-61	232	9.2	F5	2 49 51.223	0.09	4	70.028	-61 06 08.05	0.07	4	70.028				4701
2626	-55	470	8.37	G5	49 53.133	0.09	4	69.436	-55 16 47.25	0.18	4	69.436		3444		4702
2627	-39	832	9.3	K2	49 56.028	0.18	4	70.157	-38 56 32.54	0.09	4	70.157				4703
2628	-47	882	9.3	K2	50 00.099	0.06	5	70.401	-47 24 28.55	0.15	5	70.401				335
2629	-6	563	8.9	K	50 03.041	0.05	2	71.280	-6 15 34.11	0.16	2	71.280				4704
2630	+2	443	8.5	K5	2 50 21.375	0.12	2	71.276	+3 21 00.13	0.11	2	71.276				4705
2631	-50	849	7.72	K0	50 22.087	0.11	4	70.224	-50 24 59.56	0.13	4	70.224		3453		336
2632	-19	550	8.8	K5	50 26.107	0.24	2	71.276	-18 39 01.65	0.22	2	71.276				4706
2633	-21	514	7.7	G5	50 28.882	0.10	3	69.118	-21 26 07.14	0.10	3	69.118				4707
2634	-6	566	8.7	K2	50 29.168	0.01	2	71.343	-5 48 52.31	0.03	2	71.343				4708
2635	-62	237	8.9	K0	2 50 31.826	0.09	4	70.009	-62 35 51.00	0.08	4	70.009				4709
2636	-69	157	8.8	K0	50 36.336	0.13	4	69.549	-69 23 22.90	0.11	4	69.549				18699
2637	-3	456	8.9	F8	50 41.392	0.10	2	70.850	-2 57 32.39	0.02	2	70.850				4710
2638	-37	1079	7.8	K2	50 45.526	0.16	4	70.290	-37 03 01.41	0.15	4	70.290				4711
2639	-75	204	4.70	K2	50 46.008	0.16	6	69.005	-75 16 17.90	0.08	6	69.005	2199	3463	592	32199
2639 SP					2 50 45.963	0.11	6	68.790	-75 16 17.08	0.31	6	68.790	2199	3463	592	52199
2640	-53	492	9.1	G5	51 00.587	0.11	4	69.721	-53 17 16.40	0.18	4	69.721				4712
2641	-2	511	7.8	G5	51 02.799	0.06	3	70.785	-1 50 39.89	0.10	2	70.741				4713
2642	-22	502	6.74	G5	51 03.097	0.09	4	68.861	-22 17 39.03	0.15	4	68.861		3470		4714
2643	-0	447	8.8	K0	51 04.606	0.25	2	71.269	-0 08 55.92	0.01	2	71.269				4715
2644	-59	239	9.2	K5	2 51 06.567	0.07	4	69.589	-59 04 41.58	0.24	4	69.589				4716
2645	+4	456	8.9	F0	51 07.211	0.16	2	71.283	+4 54 21.86	0.18	2	71.283				4717
2646	-35	992	8.17	K0	51 07.322	0.21	4	70.265	-35 14 41.78	0.08	4	70.265		3474		4718
2647	-48	783	9.2	F5	51 09.345	0.13	4	69.999	-48 21 24.05	0.08	4	69.999				337
2648	-4	491	7.5	K0	51 13.104	0.22	2	70.753	-4 27 02.58	0.14	2	70.753				4719
2649	-85	34	8.42	K5	2 51 17.963	0.04	4	69.801	-85 21 58.08	0.30	4	69.801		3479		18700
2649 SP					51 18.095	0.15	5	71.431	-85 21 58.09	0.35	4	71.249		3479		18700
2650	-23	1106	8.2	M1	51 30.531	0.06	4	69.231	-23 20 55.16	0.06	4	69.231				4720
2651	+4	458	7.7	A3	51 34.872	0.19	2	71.246	+4 50 43.94	0.18	2	71.246				4721
2652	-38	948	5.85	F2	51 36.876	0.08	7	69.769	-38 38 25.62	0.09	7	69.769	2200	3482		32200
2653	-67	192	8.0	K0	2 51 37.774	0.23	4	69.292	-67 30 38.88	0.21	4	69.292				18701
2654	-11	547	8.0	A0	51 49.184	0.09	2	70.772	-11 17 31.76	0.18	2	70.772				4722
2655	-41	832	8.68	F2	51 50.135	0.15	4	70.275	-41 27 18.66	0.26	4	70.275		3485		338
2656	-30	1092	8.7	K0	51 57.379	0.03	3	68.890	-29 49 28.71	0.24	3	68.890				4723
2657*	-45	946	7.85	G0	52 02.394	0.13	4	70.125	-44 48 32.32	0.16	4	70.125		3490		339
2658	-45	948	9.5	G0	2 52 07.587	0.16	4	70.504	-44 43 04.59	0.09	4	70.504				340
2659	-32	1070	9.4	G5	52 22.494	0.17	4	70.579	-32 11 37.07	0.16	4	70.579				4724
2660	-3	459	8.0	K0	52 26.843	0.24	2	71.286	-3 30 31.67	0.26	2	71.286				4725
2661	-51	683	6.06	K0	52 29.274	0.11	6	68.924	-51 04 26.71	0.13	6	68.924	2202	3501		32202
2662	-30	1096	7.76	K0	52 29.703	0.05	4	69.064	-30 02 42.49	0.24	4	69.064		3503		4726
2663	+2	450	6.73	F0	2 52 31.653	0.08	2	71.359	+3 17 05.45	0.30	2	71.359			3506	4727
2664	-14	557	7.16	F0	52 32.015	0.01	4	71.293	-14 13 37.40	0.23	4	71.293	2203	3507		4728
2665	+2	451	8.5	K5	52 33.546	0.11	2	71.380	+2 47 29.47	0.33	2	71.380				4729
2666	-38	955	8.0	G5	52 36.152	0.16	4	70.126	-38 02 38.09	0.19	4	70.126				4730
2667	-33	1010	8.2	K0	52 39.166	0.16	4	70.506	-33 08 15.47	0.16	4	70.506				4731
2668	-28	933	8.5	K0	2 52 40.320	0.07	3	69.471	-28 05 46.21	0.26	3	69.471				4732
2669	-4	496	8.7	G5	52 40.883	0.26	3	71.850	-4 31 06.78	0.12	3	71.850				4733
2670	-57	486	9.2	K2	52 43.023	0.14	4	68.315	-56 59 55.31	0.14	4	68.315				4734
2671	-40	753	9.6	G5	52 50.640	0.12	4	70.762	-40 18 37.43	0.14	4	70.762				341
2672	-35	999	9.4	F8	52 51.396	0.12	4	70.375	-34 44 47.26	0.24	4	70.375				4735

2614 9.3m-9.5m, 0°2, 252°.

2657 8.3m-9.0m, 0°5, 128°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*	
2673	+	0	481	8.6	K2	2 52 53.316	0.06	2	71.306	+ 1 09 13.83	0.49	2	71.306				4736
2674	-	1	414	8.4	F5	52 54.252	0.05	2	71.396	- 0 40 13.79	0.05	2	71.396				4737
2675	+	1	512	6.55	A0	52 56.246	0.05	2	71.348	+ 1 48 59.81	0.12	2	71.348	3516			4738
2676	-	12	555	8.2	F8	53 13.097	0.16	2	71.265	- 12 33 17.34	-	1	71.656				4739
2677	-	26	1071	7.49	M0	53 13.471	0.07	4	69.303	- 26 08 07.80	0.04	4	69.303	3521			4740
2678	-	7	519	8.8	K5	2 53 13.511	0.18	3	71.830	- 6 49 42.09	0.20	3	71.830				4741
2679	-	19	565	8.9	F0	53 20.223	0.26	3	72.278	- 19 20 22.72	0.63	3	72.278				4742
2680	-	10	577	8.7	F0	53 24.534	0.23	2	71.245	- 9 38 23.87	0.25	2	71.245				4743
2681	-	20	546	7.3	K0	53 25.528	0.06	2	71.731	- 19 57 28.75	0.13	2	71.731				4744
2682	-	36	1101	8.5	K5	53 31.639	0.15	5	70.968	- 35 45 47.19	0.13	5	70.968				4745
2683	-	16	532	8.5	K2	2 53 34.156	0.14	2	71.909	- 16 15 38.61	0.23	2	71.909				4746
2684	-	46	853	8.9	K0	53 34.652	0.09	5	71.587	- 46 24 25.15	0.21	5	71.587				342
2685	-	50	866	9.4	K5	53 36.080	0.12	4	70.600	- 49 51 39.42	0.15	4	70.600				343
2686	+	17	458	5.57	F5	53 36.871	0.12	6	70.014	+ 17 49 25.82	0.23	6	70.014	2204	3532	601	32204
2687	-	17	568	8.6	K0	53 37.658	-	1	70.981	- 17 10 30.70	-	1	70.981				4747
2688	-	49	798	7.9	K0	2 53 47.851	0.21	4	70.730	- 49 08 04.81	0.13	4	70.730				344
2689	-	51	686	8.19	F0	53 51.306	0.05	4	68.622	- 51 27 43.56	0.12	4	68.622		3535		345
2690	-	9	553	4.05	K0	53 59.074	0.04	46	71.793	- 9 05 50.54	0.04	45	71.812	104	3539	602	30104
2691	-	8	552	8.7	F5	53 59.329	-	1	71.902	- 7 51 51.99	-	1	71.902				4748
2692	-	75	207	8.5	A5	54 00.218	0.08	4	69.638	- 75 38 10.59	0.32	4	69.638				18702
2692	SP				2 54 00.175	0.12	4	70.343	- 75 38 09.82	0.28	4	70.343				18702	
2693	-	43	896	8.9	K2	54 01.357	0.03	4	70.735	- 43 27 16.07	0.20	4	70.735				346
2694	-	84	34	8.5	K0	54 03.496	0.10	4	69.612	- 83 46 23.78	0.16	4	69.612				18703
2694	SP				54 03.471	0.11	4	70.812	- 83 46 23.62	0.25	4	70.812				18703	
2695	-	19	568	8.7	G5	54 05.959	-	1	71.943	- 18 54 15.06	-	1	71.943				4749
2696	-	78	77	7.56	K5	2 54 06.418	0.18	4	69.985	- 78 03 56.62	0.08	4	69.985		3540		18704
2696	SP				54 06.616	0.07	4	70.232	- 78 03 56.66	0.05	4	70.232		3540		18704	
2697	-	4	502	5.27	A2	54 06.832	0.02	90	71.205	- 3 54 45.95	0.03	90	71.205	1080	3541	603	81080
2698	-	15	519	7.68	A2	54 07.510	0.12	2	72.444	- 15 13 11.63	0.19	2	72.444		3542		4750
2699	-	24	1321	8.5	K0	54 10.111	0.11	4	69.079	- 24 30 16.13	0.13	4	69.079				4751
2700*	-	29	1088	7.8	F5	2 54 11.704	0.07	4	69.575	- 29 09 05.07	0.12	4	69.575				4752
2701	-	5	546	8.0	K2	54 12.009	0.11	2	72.495	- 5 33 10.15	0.24	2	72.495				4753
2702	-	31	1174	9.6	G0	54 12.719	0.15	4	70.019	- 31 28 20.56	0.07	4	70.019				4754
2703	-	73	195	8.1	A2	54 20.307	0.14	4	68.770	- 73 39 16.36	0.14	4	68.770				18705
2704	-	36	1105	8.9	G5	54 24.115	0.17	4	70.564	- 36 13 00.11	0.05	4	70.564				4755
2705	-	2	521	8.9	G0	2 54 24.279	0.42	2	72.439	- 1 46 24.17	-	1	72.902	2206	3547	605	4756
2706	+	3	410	6.31	M0	54 27.228	0.11	4	71.853	+ 4 18 01.34	0.17	4	71.853				4757
2707	-	33	1025	9.4	G5	54 27.796	0.11	4	70.361	- 32 59 17.30	0.11	4	70.361				4758
2708	-	10	580	8.2	F0	54 29.540	0.27	2	71.348	- 10 34 31.74	0.09	2	71.348				4759
2709	-	61	235	8.21	K0	54 34.951	0.07	4	68.812	- 61 39 50.62	0.14	4	68.812		3548		4760
2710	-	0	460	6.72	A5	2 54 36.279	0.07	2	71.283	+ 0 14 51.16	0.24	2	71.283		3549		4761
2711	-	23	1131	8.6	G5	54 37.544	0.04	4	69.821	- 23 11 10.47	0.20	4	69.821				4762
2712	-	35	1015	6.58	G5	54 47.763	0.17	4	70.355	- 35 34 41.75	0.13	4	70.355		3555		4763
2713	-	21	524	7.9	K0	54 53.987	0.06	4	69.316	- 21 26 53.17	0.05	4	69.316				4764
2714	-	13	560	8.6	K2	54 59.052	0.34	2	71.251	- 13 30 51.90	0.48	2	71.251				4765
2715*	-	25	1168	8.0	G5	2 55 01.133	0.15	3	70.148	- 25 10 30.14	0.17	3	70.148		3558		4766
2716	-	47	905	8.9	F0	55 03.571	0.17	4	70.693	- 46 55 28.06	0.01	4	70.693				347
2717	-	34	1058	9.3	F5	55 05.616	0.18	4	71.536	- 34 02 53.18	0.16	4	71.536				4767
2718	-	46	864	8.2	K0	55 13.062	0.18	4	71.008	- 46 30 30.33	0.15	4	71.008				348
2719	-	36	1112	7.43	F2	55 13.259	0.04	4	70.816	- 36 37 59.24	0.19	4	70.816		3563		4768
2720	+	20	480	5.85	F0	2 55 13.501	0.10	7	70.377	+ 20 28 09.72	0.14	7	70.377	1081	3562	606	31081
2721	-	2	526	8.2	A2	55 27.778	0.34	2	71.279	- 2 32 10.46	0.14	2	71.279				4769
2722	-	22	520	8.5	G5	55 31.571	0.17	4	68.816	- 22 25 37.83	0.12	4	68.816				4770
2723	-	56	477	9.0	K2	55 39.083	0.32	4	69.640	- 56 23 33.22	0.04	4	69.640				4771
2724*	-	16	538	7.8	G0	55 41.657	0.10	2	71.301	- 16 02 19.93	0.44	2	71.301		3571		4772
2725	-	61	237	8.6	K0	2 55 43.066	0.14	4	69.953	- 60 47 48.00	0.16	3	69.646				4773
2726	-	12	566	6.70	G0	55 48.787	0.07	2	71.807	- 12 12 18.95	0.36	2	71.807		3573		4774
2727	-	62	243	8.3	K0	55 50.654	0.09	4	69.807	- 62 00 44.15	0.10	4	69.807				4775
2728	-	68	181	8.9	K2	55 54.109	0.11	4	69.263	- 68 27 25.79	0.35	3	68.746				18706
2729	-	72	214	8.1	G5	55 59.477	0.12	4	69.302	- 72 00 40.97	0.08	4	69.302				18707
2730	+	1	517	7.8	K0	2 56 01.960	0.07	2	71.831	+ 1 55 17.77	0.19	2	71.831				4776
2731	-	46	874	8.3	K0	56 06.036	0.15	4	70.307	- 45 52 12.10	0.10	4	70.307				349
2732	-	64	213	8.3	K0	56 08.622	0.19	4	69.976	- 64 03 22.53	0.08	4	69.976				4777
2733	-	55	476	6.82	F0	56 09.690	0.26	6	70.418	- 55 12 47.62	0.16	6	70.418	2208	3579	611	32208
2734	-	59	247	8.3	K0	56 20.141	0.09	4	70.024	- 59 06 15.05	0.25	4	70.024				4778
2735p	-	40	771	3.42	A2	2 56 21.800	0.04	63	71.320	- 40 30 14.59	0.05	64	71.299	106	3584	613	30106
2736	-	27	1043	8.3	G5	56 31.841	0.09	3	68.867	- 27 07 35.20	0.29	3	68.867				4779
2737	-	58	248	9.0	F2	56 34.383	0.21	4	70.068	- 57 45 23.64	0.22	4	70.068				4780
2738	-	38	986	7.57	G5	56 36.280	0.29	3	70.456	- 38 11 29.05	0.24	3	70.456		3589		4781
2739	-	5	554	7.3	A0	56 38.652	0.07	2	71.333	- 4 58 55.17	0.17	2	71.333				4782
2740	-	64	214	8.4	K0	2 56 40.596	0.16	4	69.806	- 64 28 21.30	0.22	4	69.806				18708
2741	-	15	525	8.8	K0	56 44.933	0.02	2	71.374	- 15 14 24.38	0.00	2	71.374				4783
2742	-	55															

2700 SDS, 8.5m-9.0m, 0°2.
2715 A 2242, 8.4m-8.6m, 1°0.

2724 A 2247, 7.8m-11.3m, 1°7, 231°.
2735 SDS, 4.4m, 8°, 89°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*	
2745	+	8	455	4.69	B5	2 57 01.874	0.04	44	71.660	+ 8 42 33.34	0.05	43	71.678	1083	3595	615	31083
2746	-	4	511	7.75	F8	57 03.776	0.02	2	71.859	- 4 18 52.54	0.00	2	71.859			616	4787
2747	-	67	195	9.2	A5	57 04.340	0.12	4	70.029	-67 03 29.05	0.19	4	70.029				18709
2748	-	33	1040	8.1	K0	57 06.754	0.22	4	70.520	-33 06 40.92	0.11	4	70.520				4788
2749	-	7	533	6.63	K0	57 08.605	0.13	2	71.963	- 7 22 40.29	0.12	2	71.963		3596		4789
2750	-	3	475	5.48	B9	2 57 09.525	0.08	6	71.492	- 2 39 46.75	0.08	6	71.492	2209	3597		32209
2751	-	44	915	7.26	G0	57 10.162	0.12	7	69.985	-43 56 43.65	0.10	6	69.830	2210	3598		32210
2752	-	41	857	8.7	G5	57 14.801	0.19	4	70.118	-40 55 17.31	0.09	4	70.118				350
2753	-	17	580	8.4	F0	57 22.543	0.03	2	72.507	-16 55 25.43	0.31	3	72.007				4790
2754	-	54	494	7.73	K0	57 27.585	0.08	4	69.102	-53 53 16.95	0.14	4	69.102		3604		4791
2755	-	2	532	7.8	F0	2 57 30.998	0.13	2	70.870	- 2 00 08.68	0.10	2	70.870				4792
2756	-	14	576	7.42	G5	57 33.144	0.09	2	71.491	-13 52 53.11	0.21	2	71.491		3605		4793
2757	-	0	471	8.6	K0	57 34.253	0.19	2	71.731	+ 0 02 15.55	0.41	2	71.731				4794
2758	-	33	1042	6.29	A0	57 34.570	0.14	6	70.096	-32 42 19.46	0.17	6	70.096	2211	3606	617	32211
2759	-	30	1137	8.2	F5	57 41.368	0.05	4	68.822	-30 22 12.23	0.25	4	68.822				4796
2760	-	9	572	8.9	G5	2 57 50.416	0.05	2	70.870	- 9 14 12.99	0.20	2	70.870				4797
2761	-	64	215	5.08	A5	57 50.839	0.11	6	70.831	-64 16 10.93	0.16	6	70.831	2212	3611	619	32212
2762	-	12	576	8.1	G5	57 54.801	0.15	2	71.307	-11 39 23.92	0.07	2	71.307				4798
2763	-	54	496	9.3	K0	57 56.857	0.13	4	69.287	-54 27 09.98	0.17	4	69.287				4799
2764	-	28	978	7.84	K0	58 00.937	0.20	4	69.102	-28 16 38.49	0.15	4	69.102		3615		4800
2765	+	10	401	6.20	K5	2 58 01.274	0.10	6	70.038	+10 40 23.86	0.16	6	70.038	2213	3616		32213
2766	-	32	1112	9.1	K0	58 08.181	0.10	4	69.963	-31 50 16.84	0.12	4	69.963				4801
2767	-	7	534	8.8	F2	58 10.137	0.30	2	71.307	- 6 46 43.69	0.07	2	71.307				4802
2768	-	35	1039	9.0	K0	58 21.681	0.19	4	70.284	-35 17 31.01	0.11	4	70.284				4803
2769	-	37	1119	8.4	G0	58 22.129	0.06	4	70.138	-37 39 07.95	0.22	4	70.138				4804
2770	-	49	826	9.5	K5	2 58 24.516	0.06	4	70.592	-49 36 55.85	0.13	4	70.592				351
2771	-	21	535	7.52	M0	58 32.566	0.06	3	70.211	-20 53 27.14	0.17	3	70.211		3624		4805
2772	-	58	251	8.6	G0	58 43.387	0.09	5	70.211	-58 26 13.50	0.30	5	70.211				4806
2773	-	18	512	7.4	K0	58 48.104	0.01	2	71.245	-18 03 46.11	0.17	2	71.245				4807
2774	+	0	499	8.2	A3	58 50.880	0.08	2	71.754	+ 0 57 34.33	0.13	2	71.754				4808
2775	-	8	564	9.1	K0	2 58 53.849	0.02	2	71.814	- 8 36 18.96	0.24	2	71.814				4809
2776	-	48	825	9.5	K5	58 56.726	0.12	4	70.577	-48 24 28.54	0.15	4	70.577				352
2777	+	25	477	5.91	A2	58 56.958	0.07	6	70.410	+26 15 56.85	0.16	6	70.410	2214	3629		32214
2778	+	1	528	8.7	A0	59 02.510	0.08	2	71.809	+ 1 58 18.50	0.09	2	71.809				4810
2779	-	24	1374	8.7	G5	59 07.388	0.23	4	70.263	-24 12 34.42	0.15	4	70.263				4811
2780	+	2	465	8.4	A0	2 59 15.013	0.34	2	71.933	+ 2 56 29.45	0.22	2	71.933				4812
2781	-	50	893	9.7	K0	59 15.173	0.11	3	69.870	-49 57 19.94	0.03	3	69.870				353
2782	-	1	433	8.8	G5	59 17.428	--	1	72.668	- 1 21 32.65	--	1	72.668				4813
2783	-	1	434	8.0	G0	59 19.746	0.04	2	72.154	- 1 06 53.14	0.02	2	72.154				4814
2784	-	43	924	9.5	K5	59 23.335	0.08	4	71.064	-43 34 08.63	0.11	4	71.064				354
2785	-	28	987	5.90	G5	2 59 28.638	0.11	6	69.442	-28 17 03.15	0.10	6	69.442	2215	3641		32215
2786	-	3	482	8.5	A5	59 29.363	--	1	71.937	- 3 08 11.14	--	1	71.937				4815
2787	-	10	594	6.02	G5	59 30.682	0.13	4	72.469	-10 09 27.32	0.13	4	72.469	2216	3642		4816
2788	-	79	82	9.2	K5	59 34.481	0.15	5	70.245	-79 39 59.67	0.27	5	70.245				18710
2788	SP					59 34.460	0.12	4	69.761	-79 39 59.17	0.21	4	69.761				18710
2789	+	3	419	2.82	M0	2 59 39.739	0.02	91	71.002	+ 3 53 39.65	0.03	90	70.996	107	3643	623	80107
2790	-	25	1217	8.6	K2	59 39.935	0.05	4	70.557	-25 23 11.06	0.12	4	70.557				4817
2791	-	18	516	7.40	F0	59 44.521	0.04	47	71.256	-18 24 12.92	0.05	46	71.312	1084	3645	624	31084
2792	-	65	208	8.9	K0	3 00 00.093	0.25	4	69.713	-65 17 57.33	0.12	4	69.713				18711
2793	-	35	1050	8.9	K0	00 05.754	0.11	4	70.856	-35 20 06.59	0.03	4	70.856				4818
2794	-	12	581	8.7	K0	3 00 06.622	0.27	2	72.933	-12 36 43.60	0.16	2	72.933				4819
2795	+	3	422	8.8	G0	00 09.374	--	1	71.771	+ 3 26 06.33	--	1	71.771				4820
2796	-	42	996	8.0	K2	00 10.667	0.04	4	71.206	-42 01 57.91	0.22	4	71.206				355
2797	-	24	1387	4.16	A3	00 10.940	0.05	22	70.724	-23 49 11.32	0.06	22	70.724	1085	3649	625	31085
2798	-	67	201	8.0	K0	00 11.775	0.09	4	69.775	-67 17 57.82	0.15	4	69.775				18712
2799	-	15	532	8.3	G5	3 00 11.790	--	1	72.804	-15 28 07.21	--	1	72.804				4821
2800	-	44	937	9.1	G0	00 14.916	0.08	4	71.556	-44 34 42.16	0.18	4	71.556				356
2801	-	3	483	8.3	K0	00 26.011	0.19	2	72.390	- 3 11 36.29	0.21	2	72.390				4822
2802	-	63	204	8.1	K0	00 27.888	0.08	4	70.256	-63 41 33.05	0.27	4	70.256				4823
2803	-	47	929	9.9	M0	00 34.834	0.07	3	70.234	-46 44 52.04	0.10	3	70.234				357
2804	-	38	1006	8.8	K0	3 00 39.174	0.16	4	70.850	-38 26 12.16	0.15	4	70.850				4824
2805	-	40	787	8.3	F2	00 40.438	0.17	4	70.768	-40 26 26.11	0.13	4	70.768				358
2806	-	18	523	8.5	G5	00 44.355	--	1	72.790	-18 25 33.64	--	1	72.790				4825
2807	-	27	1062	8.5	G0	00 51.758	0.07	4	69.392	-27 10 36.06	0.20	4	69.392				4826
2808	-	20	574	8.2	K0	01 00.430	0.17	2	71.937	-19 47 44.26	0.23	2	71.937				4827
2809	-	86	33	9.7	G5	3 01 00.592	0.11	5	69.942	-86 37 17.56	0.13	5	69.942				18713
2809	SP					01 00.486	0.54	4	71.327	-86 37 17.68	0.09	3	71.050				18713
2810	-	82	53	9.1	K0	01 04.370	0.43	4	70.384	-81 57 31.06	0.09	4	70.384				18714
2810	SP					01 04.468	0.15	6	71.752	-81 57 31.28	0.12	4	71.778				18714
2811	-	47	932	5.66	K0	01 13.288	0.04	68	70.607	-47 10 12.65	0.04	57	70.604	1086	3667	629	31086
2812	-	29	1131	8.7	K0	3 01 13.334	0.08	4	70.207	-29 14 34.92							

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
2817	- 4	520	8.0	K5	3 01 41.659	0.25	2	71.347	- 4 31 16.27	0.33	2	71.347				4832
2818	-49	847	8.7	G5	01 43.505	0.11	4	70.560	-48 53 39.15	0.08	4	70.560				359
2819	-21	551	9.0	K0	01 48.396	0.04	4	70.034	-20 54 42.88	0.15	4	70.034				4833
2820	- 8	572	5.43	A3	01 49.113	0.17	2	71.306	- 7 47 43.02	0.01	2	71.306				4834
2821	-76	224	8.8	K5	01 49.314	0.13	4	69.800	-76 21 52.66	0.06	4	69.800				18716
2821	SP				3 01 49.335	0.14	4	70.805	-76 21 52.75	0.47	4	70.805				18716
2822	-36	1149	9.5	F5	01 57.463	0.14	4	70.352	-36 06 27.72	0.15	4	70.352				4835
2823	-56	488	8.6	K5	01 59.048	0.09	4	70.902	-56 16 21.77	0.13	4	70.902				4836
2824	-23	1200	8.5	K0	02 00.060	0.13	3	70.430	-23 20 16.00	0.23	3	70.430				4837
2825	+ 1	534	6.05	K0	02 02.789	0.15	6	69.945	+ 1 40 10.77	0.05	6	69.945	2218	3683		32218
2826	-75	216	8.5	K0	3 02 03.391	0.16	4	70.536	-75 29 00.13	0.07	4	70.536				18717
2826	SP				02 03.358	0.26	5	71.539	-75 28 59.57	0.30	4	71.808				18717
2827	-72	219	5.52	B8	02 08.347	0.06	41	70.622	-72 05 51.44	0.05	40	70.615	113	3687	633	30113
2827	SP				02 08.300	0.08	46	71.249	-72 05 51.90	0.14	44	71.249	113	3687	633	50113
2828	-39	893	8.12	G5	02 09.529	0.27	4	70.150	-39 21 54.78	0.08	4	70.150				4838
2829	-58	255	9.0	K0	3 02 09.699	0.13	3	71.080	-57 43 10.60	0.15	3	71.080				4839
2830	-34	1098	8.8	F8	02 13.868	0.09	4	70.303	-34 36 08.23	0.11	4	70.303				4840
2831	-59	250	7.0v	M3	02 14.231	0.19	4	71.325	-59 07 38.73	0.19	4	71.325			3690	4841
2832	-52	356	9.0	K0	02 16.263	0.13	3	70.836	-52 26 34.12	0.14	3	70.836				4842
2833	-10	602	8.6	K2	02 21.774	0.16	2	71.753	-10 22 21.60	0.10	2	71.753				4843
2834	-51	700	9.6	K2	3 02 23.769	--	1	69.741	-50 55 22.05	--	1	69.741				360
2835	-60	236	5.16	F0	02 25.699	0.04	57	71.403	-59 55 53.67	0.05	56	71.412	110	3694	634	30110
2836	-12	590	8.3	F5	02 26.331	0.17	2	71.347	-12 21 52.92	0.03	2	71.347				4844
2837	-30	1167	9.1	K2	02 27.370	0.08	4	69.727	-30 38 25.18	0.10	4	69.727				4845
2838	-48	839	7.27	K0	02 27.644	0.10	4	69.864	-48 03 03.27	0.14	4	69.864			3696	361
2839	-26	1132	7.6	G5	3 02 32.935	0.10	4	69.564	-25 58 21.67	0.19	4	69.564				4846
2840	+ 0	511	8.5	F5	02 40.569	0.13	2	71.355	+ 0 39 35.43	0.24	2	71.355				4847
2841	-33	1068	8.4	K5	02 41.709	0.17	4	70.135	-32 45 04.76	0.08	4	70.135				4848
2842	-61	244	7.71	K0	02 42.029	0.21	4	70.640	-61 02 06.02	0.11	4	70.640			3698	4849
2843	-14	598	8.2	G5	02 43.174	0.15	2	71.346	-14 35 33.15	0.05	2	71.346				4850
2844	-81	67	7.65	F0	3 02 45.706	0.11	4	69.635	-81 17 04.86	0.13	4	69.635			3700	18718
2844	SP				02 45.787	0.12	4	70.636	-81 17 04.62	0.22	4	70.636			3700	18718
2845	-66	169	7.9	M2	02 48.441	0.13	5	71.471	-65 43 21.99	0.15	5	71.471				18719
2846	-65	210	8.91	F0	02 51.001	0.17	5	71.450	-65 01 00.48	0.18	5	71.450			3701	18720
2847	-19	600	7.3	K0	02 55.841	0.04	2	71.324	-19 16 26.33	0.10	2	71.324				4851
2848	-70	204	8.4	K0	3 03 03.510	0.11	4	71.219	-70 40 16.75	0.11	4	71.219				18721
2849	-17	597	7.32	F2	03 12.151	0.10	2	71.286	-16 48 04.31	0.04	2	71.286			3706	4852
2850	-53	514	7.62	K0	03 16.545	0.12	6	70.522	-53 01 22.28	0.16	5	70.464			3707	4853
2851	+ 0	515	8.5	K0	03 22.549	0.03	2	71.284	+ 1 00 50.19	0.07	2	71.284				4854
2852	-41	893	7.91	F2	03 26.368	0.12	4	70.099	-41 10 38.53	0.20	4	70.099			3709	362
2853	-24	1421	8.2	F2	3 03 30.203	0.18	3	69.201	-24 23 56.74	0.22	3	69.201				4855
2854	-40	803	9.2	G0	03 30.498	0.06	4	70.312	-40 00 54.19	0.15	4	70.312				363
2855	+ 1	541	8.5	K5	03 31.863	0.10	2	71.797	+ 2 09 47.32	0.04	2	71.797				4856
2856	-38	1021	9.2	K1	03 35.851	0.21	4	70.209	-37 49 26.87	0.45	4	70.209				4857
2857	+12	436	5.84	G5	03 38.709	0.18	6	69.623	+12 59 43.19	0.13	6	69.623	2220	3712		32220
2858	-39	901	8.1	K0	3 03 43.134	0.20	4	70.021	-39 29 41.22	0.10	4	70.021				4858
2859	+ 3	431	8.5	A2	03 45.633	0.10	2	71.444	+ 3 37 03.65	0.24	2	71.444				4859
2860	-13	591	8.3	K5	03 53.216	0.04	2	71.807	-13 26 59.87	0.20	2	71.807				4860
2861	- 9	591	8.2	K8	03 58.352	0.18	2	71.732	- 8 39 05.50	0.03	2	71.732				4861
2862	-29	1146	8.5	K0	04 01.656	0.06	3	68.882	-29 00 07.95	0.43	3	68.882				4862
2863	- 6	606	5.56	M0	3 04 04.975	0.06	6	69.496	- 6 16 50.68	0.09	6	69.496	2221	3718		32221
2864	-16	561	8.6	K0	04 07.711	0.17	2	71.944	-16 23 39.41	0.13	2	71.944				4863
2865	-10	610	6.79	G5	04 08.421	0.15	2	71.398	-10 26 39.05	0.03	2	71.398			3719	4864
2866	- 7	546	8.2	K2	04 11.395	0.30	2	71.941	- 6 50 05.61	0.31	2	71.941				4865
2867	-68	186	8.8	K2	04 11.554	0.10	4	69.758	-68 03 45.14	0.13	4	69.758				18722
2868	-31	1239	9.4	G0	3 04 12.838	0.11	4	69.325	-31 30 23.23	0.17	4	69.325				4866
2869	- 2	552	8.5	K0	04 12.892	0.17	2	71.820	- 1 47 27.08	0.49	2	71.820				4867
2870	-18	536	8.2	F0	04 19.260	0.10	2	71.342	-17 40 04.13	0.27	2	71.342				4868
2871	- 7	547	8.9	G0	04 33.198	0.19	2	71.762	- 7 26 19.29	0.17	2	71.762				4869
2872	-30	1185	7.26	K0	04 33.869	0.16	4	69.074	-30 10 44.88	0.12	4	69.074			3727	4870
2873	+ 4	496	8.3	K2	3 04 36.864	0.04	2	71.291	+ 4 49 41.51	0.08	2	71.291				4871
2874	- 2	554	7.10	G5	04 40.701	0.01	2	71.795	- 1 59 39.52	0.03	2	71.795			3730	4872
2875	-62	254	8.9	G5	04 42.255	0.14	4	69.131	-62 15 29.71	0.09	4	69.131				4873
2876	-14	604	7.16	G0	04 56.803	0.02	175	71.115	-13 57 04.50	0.02	173	71.112	1087	3734	637	81087
2877	-21	563	8.0	G0	05 01.491	0.06	4	69.182	-20 50 23.66	0.10	4	69.182				4874
2878	+ 0	522	7.8	K0	3 05 04.928	0.07	2	71.772	+ 1 12 53.12	0.12	2	71.772				4875
2879p	- 1	444	9.0	F8	05 07.440	0.29	2	72.435	- 0 43 44.19	0.19	2	72.435				4876
2880	-33	1087	8.9	G5	05 08.261	0.11	4	69.902	-33 29 32.62	0.03	4	69.902				4877
2881	-26	1149	8.4	F0	05 10.516	0.19	4	70.011	-25 44 43.80	0.25	4	70.011				4878
2882	-45	1028	8.7	K0	05 19.432	0.15	4	69.884	-45 32 05.73	0.15	4	69.884				364
2883	- 6	610	8.2	K2	3 05 20.132	0.08	2	71.346	- 5 57 28.29	0.10	2	71.346				4879
2884	-72	224	7.99	K0	05 20.784	0.04	4	69.538	-72 11 47.49	0.18	4	69.538			3739	18723
2885	-60	241	8.2	K0	05 29.828	0.19	4	69.307	-60 18 07.75	0.10	4	69.307				4880
2886	-73	201	7.59	G5	05 32.193	0.05	4	69.521	-73 39 50.38	0.07	4	69.521			3743	18724
2887	-35	1082	8.6	K5	05 32.757	0.16	4	70.086	-34 50 40.65	0.08	4	70.086				4881

2831 7.0m to 9.3m.

2879 11.4m, 4°0, 34°.

CATALOG OF 23,001 STARS FOR 1950.0

275

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
2888	-12	600	7.8	G0	3 05 37.716	0.13	2	71.741	-12 13 57.34	0.36	2	71.741				4882
2889	-51	720	8.4	M0	05 47.386	0.13	4	69.582	-51 39 02.98	0.18	4	69.582				365
2890	-10	620	8.21	G5	06 02.135	0.13	2	71.294	-9 44 05.94	0.51	2	71.294				4883
2891*	-42	1023	8.2	--	06 19.561	0.25	4	70.310	-42 42 16.16	0.21	4	70.310		3752		366
2892	-43	956	9.5	K0	06 25.404	0.04	4	70.733	-43 20 50.93	0.16	4	70.733				367
2893	+2	487	8.6	K5	3 06 32.350	0.04	2	71.313	+2 39 20.58	0.02	2	71.313				4884
2894	+28	499	5.60	B9	06 35.870	0.05	49	71.121	+28 53 14.81	0.07	48	71.125	1088	3762	640	31088
2895	-50	928	8.4	K0	06 35.997	0.10	4	70.380	-50 37 15.87	0.17	4	70.380				368
2896	-19	617	7.3	A0	06 37.264	0.11	2	71.313	-19 09 33.69	0.18	2	71.313				4885
2897	-25	1278	7.40	G5	06 40.922	0.07	3	69.201	-25 04 43.89	0.14	3	69.201		3766		4886
2898	-35	1092	7.09	G0	3 06 43.638	0.11	6	69.854	-35 37 19.73	0.20	6	69.854		3771		21002
2899	-44	992	8.7	K0	06 45.974	0.17	4	70.340	-44 30 15.60	0.13	4	70.340				369
2900	-19	618	9.0	G0	06 50.091	0.18	2	71.220	-19 04 10.92	0.14	2	71.220				4887
2901	-22	556	8.4	K0	06 54.247	0.16	4	69.094	-22 01 36.73	0.09	4	69.094				4888
2902	-36	1177	9.4	G0	06 54.435	0.11	4	70.567	-36 13 59.74	0.03	4	70.567				4889
2903	-3	502	8.6	A5	3 06 56.617	0.07	2	70.795	-3 25 26.38	0.45	2	70.795				4890
2904	-66	170	7.96	F0	07 00.399	0.12	4	69.303	-66 06 37.03	0.25	4	69.303		3774		18725
2905	-24	1462	8.0	K5	07 01.492	0.15	3	69.218	-24 19 38.04	0.04	3	69.218				4891
2906	-27	1103	7.46	A0	07 04.469	0.17	3	69.446	-26 54 20.05	0.31	3	69.446		3778	641	4892
2907	-1	447	8.9	K0	07 05.974	0.25	2	70.828	-1 11 36.20	0.12	2	70.828				4893
2908	-18	545	8.8	K2	3 07 17.784	0.14	2	70.738	-18 15 18.17	0.02	2	70.738				4894
2909	+2	491	7.8	F0	07 20.467	0.14	2	71.257	+2 52 19.67	0.32	2	71.257				4895
2910	-52	367	9.2	G8	07 23.470	0.12	4	69.112	-52 41 33.35	0.20	4	69.112				4896
2911	-31	1262	7.93	G5	07 29.856	0.24	4	68.856	-31 26 34.87	0.13	4	68.856		3784		4897
2912	-78	86	8.6	M2	07 35.754	0.12	4	69.078	-77 48 06.08	0.05	4	69.078				18726
2912 SP					3 07 35.730	0.03	5	70.863	-77 48 05.92	0.07	4	70.768				18726
2913	-46	934	8.5	G5	07 42.798	0.11	4	70.004	-46 04 33.08	0.23	4	70.004				370
2914	+3	434	8.7	F8	07 48.219	0.07	2	71.280	+4 04 10.17	0.07	2	71.280				4898
2915	-9	603	9.0	F8	07 53.983	0.58	2	71.295	-9 18 51.96	0.09	2	71.295				4899
2916	-21	569	8.6	K2	08 01.069	0.06	4	69.022	-20 44 40.24	0.10	4	69.022				4900
2917	-0	498	7.5	A3	3 08 02.122	0.01	2	71.277	+0 01 26.80	0.30	2	71.277				4901
2918	-47	978	9.8	F5	08 03.109	0.14	4	70.479	-47 03 28.11	0.18	4	70.479				371
2919	-5	592	7.8	K0	08 09.407	0.10	2	71.320	-5 34 57.42	0.26	2	71.320				4902
2920	-12	606	8.8	F5	08 09.863	0.06	2	71.288	-11 50 07.99	0.14	2	71.288				4903
2921	-33	1107	8.9	F5	08 10.195	0.15	4	69.887	-33 32 13.99	0.18	4	69.887				4904
2922	-7	556	9.1	G0	3 08 10.738	0.13	2	71.359	-7 15 04.42	0.43	2	71.359				4905
2923	-35	1098	7.9	K2	08 11.614	0.15	4	70.104	-35 07 10.24	0.08	4	70.104				4906
2924	-72	231	8.9	K5	08 12.475	0.12	4	68.800	-71 54 33.07	0.18	4	68.800				18727
2925	-55	494	8.8	K2	08 18.860	0.13	4	69.192	-55 12 50.26	0.09	4	69.192				4907
2926	-15	551	8.5	K0	08 21.640	0.21	2	71.339	-15 37 28.47	0.18	2	71.339				4908
2927	-55	495	7.89	K5	3 08 24.877	0.09	4	69.081	-55 40 34.86	0.15	4	69.081		3797		4909
2928	-11	603	7.24	G5	08 27.326	0.06	2	71.321	-11 18 45.92	0.13	2	71.321		3798		4910
2929	-57	505	8.5	K5	08 30.186	0.08	4	69.334	-57 08 08.70	0.25	4	69.334				4911
2930	-51	737	7.74	G0	08 30.399	0.18	6	69.072	-51 01 17.18	0.11	6	69.072	2223	3800	647	32223
2931	+19	477	4.53	K0	08 46.128	0.06	24	71.838	+19 32 19.95	0.09	24	71.838	114	3805	648	30114
2932	-4	540	6.34	M0	3 08 48.403	0.08	4	71.374	-3 59 58.15	0.28	4	71.374	2224	3806		4912
2933	-9	606	9.0	G5	08 48.655	0.12	3	71.962	-9 03 35.92	0.05	3	71.962				4913
2934	-37	1185	9.3	G0	08 55.424	0.16	4	70.242	-37 22 16.14	0.07	4	70.242				4914
2935	+4	507	9.0	K0	08 56.652	0.23	2	71.957	+4 32 08.24	0.04	2	71.957				4915
2936	-16	587	6.34	K0	08 57.268	0.07	2	71.402	-16 12 46.44	0.01	2	71.402		3811		4916
2937	-32	1185	8.4	K0	3 09 06.307	0.10	4	70.744	-32 16 23.17	0.20	4	70.744				4917
2938	-30	1216	9.1	G0	09 07.430	0.04	4	69.819	-30 41 20.36	0.25	4	69.819				4918
2939	-14	617	7.7	F5	09 09.015	0.22	3	72.294	-13 42 40.83	0.18	3	72.294				4919
2940	-48	865	8.8	K0	09 14.553	0.08	4	70.560	-48 31 21.34	0.07	4	70.560				372
2941	-59	258	8.9	G5	09 14.829	0.05	4	69.767	-59 00 58.14	0.13	4	69.767				4920
2942	-46	942	7.73	K0	3 09 22.397	0.16	4	70.598	-46 32 18.40	0.19	4	70.598		3822		373
2943	-38	1050	8.6	G5	09 26.761	0.09	4	71.068	-38 12 24.29	0.14	3	71.494				4921
2944	-7	561	8.6	K0	09 29.127	--	1	71.891	-6 59 09.58	--	1	71.891				4922
2945	-1	455	8.4	A5	09 41.715	--	1	71.910	-1 07 59.19	--	1	71.910				4923
2946	-29	1174	6.92	G5	09 42.970	0.03	3	70.831	-29 20 59.27	0.23	3	70.831		3825		4924
2947	-34	1153	9.1	G5	3 09 43.335	0.11	3	70.539	-34 39 20.10	0.05	3	70.539				4925
2948	-14	620	8.9	K0	09 44.743	--	1	71.926	-14 25 37.23	--	1	71.926				4926
2949	+6	496	5.84	*	09 46.951	0.07	6	70.491	+6 28 25.64	0.16	6	70.491	2226	3827	654	32226
2950	-28	1057	8.8	K0	09 57.367	0.10	4	71.045	-27 45 54.85	0.20	4	71.045				4927
2951	-8	599	8.9	K0	10 01.104	--	1	71.932	-8 14 02.38	--	1	71.932				4928
2952	-12	614	8.6	K5	3 10 05.322	--	1	72.695	-11 48 08.32	--	1	72.695				4929
2953	+2	498	8.1	A0	10 12.557	--	1	72.758	+2 30 29.34	--	1	72.758				4930
2954	-3	514	8.7	K0	10 12.709	--	1	72.804	-3 05 37.51	--	1	72.804				4931
2955	-1	457	5.14	F8	10 13.451	0.01	2	71.971	-1 22 55.91	0.22	2	71.971	116	3838	656	30116
2956	-32	1192	8.4	K0	10 18.431	0.15	4	70.553	-31 53 26.67	0.09	4	70.553				4933
2957	-30	1226	8.7	K0	3 10 28.962	0.06	2	70.191	-29 47 55.04	0.05	2	70.191				4934
2958	-30	1227	7.9	K0	10 31.531	0.12	4	71.410	-30 20 31.71	0.09	4	71.410				4935
2959	-52	371	8.6	K2	10 36.871	0.16	4	69.814	-52 08 34.76	0.09	4	69.814				4936
2960	-44	1025	5.92	F2	10 40.472	0.17	6	71.649	-44 36 23.12	0.15	6	71.649	2228	3845	657	32228
2961	-56	505	8.7	G8	10 46.078	0.12	5	71.016	-56 30 47.83	0.08	5	71.016				4937

2891 SDS, 9.8m-10.3m, 272, 263°.

2949 G5+A5.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
2962	-26	1192	7.5	G5	3 10 46.524	0.14	4	71.141	-26 26 44.34	0.11	4	71.141				4938
2963	-42	1046	7.5	F0	11 08.190	0.15	4	70.139	-42 33 38.07	0.13	4	70.139				374
2964	-36	1209	8.8	G5	11 11.096	0.18	4	71.104	-36 39 57.51	0.16	4	71.104				4943
2965	-28	1067	7.02	A2	11 14.232	0.07	4	70.804	-27 45 37.10	0.17	4	70.804		3854		4944
2966	-47	990	7.21	G0	11 14.618	0.08	5	70.821	-47 20 28.82	0.08	5	70.821		3856		377
2967	-62	262	8.9	F8	3 11 15.704	0.13	4	70.673	-62 28 26.82	0.17	4	70.673				4945
2968	-64	234	9.3	F8	11 15.818	0.26	3	71.261	-64 31 09.02	0.19	3	71.261				18728
2969	-57	513	5.72	N0	11 16.986	0.06	11	70.272	-57 30 29.27	0.14	11	70.272	118	3857	659	30118
2970	-23	1277	8.7	G5	11 17.795	0.13	3	70.201	-23 12 46.99	0.18	3	70.201				4946
2971	-19	633	8.6	K2	11 21.140	--	1	71.937	-18 53 29.15	--	1	71.937				4947
2972	-7	569	7.80	F2	3 11 26.906	0.06	2	71.798	-6 50 57.52	0.26	2	71.798		3861		4948
2973	-86	34	8.8	M2	11 33.074	0.26	4	69.828	-85 49 47.43	0.28	4	69.828				18729
2973	SP				11 32.845	0.15	4	70.400	-85 49 47.57	0.15	4	70.400				18729
2974	-49	895	7.71	K0	11 37.417	0.20	4	70.769	-49 30 55.42	0.10	4	70.769		3865		375
2975	-51	743	8.4	K0	11 39.132	0.16	4	70.672	-51 17 14.73	0.10	3	70.605				376
2976	-75	225	7.68	K0	3 11 56.586	0.18	4	71.169	-74 51 08.39	0.15	4	71.169		3867		18730
2977	-7	571	8.6	K2	11 59.217	--	1	71.836	-7 21 47.96	--	1	71.836				4949
2978	+20	527	4.95	A0	12 01.288	0.04	31	70.824	+20 51 36.39	0.06	31	70.824	1089	3872	662	81089
2979	-2	581	7.2	M0	12 04.526	0.09	2	71.323	-2 31 04.87	0.19	2	71.323				4950
2980	+3	447	8.8	A0	12 18.272	0.13	2	71.355	+4 06 55.65	0.01	2	71.355				4951
2981	-40	833	7.50	K0	3 12 19.737	0.11	4	70.600	-40 26 27.23	0.10	4	70.600		3881		378
2982	-50	961	8.5	K0	12 20.353	0.03	4	70.529	-50 05 50.53	0.19	3	70.434				379
2983	+0	548	8.8	K0	12 24.967	0.07	2	71.974	+0 43 05.80	1.41	2	71.974				4952
2984	-22	572	8.0	K2	12 34.172	0.27	4	69.765	-21 56 01.54	0.21	4	69.765				4953
2985	-6	630	8.4	A2	12 37.098	--	1	70.943	-5 39 17.39	--	1	70.943				4954
2986	-43	1006	7.8	K2	3 12 37.765	0.12	4	70.764	-42 51 29.09	0.09	4	70.764				380
2987	-36	1218	6.85	G0	12 42.096	0.06	35	70.888	-35 44 33.38	0.05	34	70.887	1090	3886	665	31090
2988	-34	1174	8.7	F8	12 45.687	0.07	4	70.620	-34 02 46.29	0.07	4	70.620				4955
2989	-59	262	7.8	K0	12 50.848	0.09	4	70.531	-59 17 48.08	0.19	4	70.531				4956
2990	-13	617	7.8	K0	12 53.456	0.09	2	71.951	-13 10 18.83	0.09	2	71.951				4957
2991	+1	570	9.1	K0	3 12 56.030	0.08	2	72.004	+1 36 24.69	0.05	2	72.004				4958
2992	-1	466	8.6	G5	12 58.600	--	1	71.853	-0 39 47.84	--	1	71.853				4959
2993	-20	605	6.86	A0	12 59.687	0.12	6	70.207	-20 12 12.18	0.06	6	70.207	2229	3889		32229
2994	-28	1075	7.83	K0	13 06.676	0.14	4	70.321	-28 31 45.62	0.16	4	70.321				4960
2995	-44	1038	7.86	G5	13 11.956	0.15	5	70.733	-44 18 18.10	0.10	5	70.733				381
2996	-37	1218	8.6	F5	3 13 21.182	0.03	4	71.047	-37 13 33.36	0.17	4	71.047				4961
2997	-9	624	4.90	A3	13 24.145	0.04	35	71.457	-9 00 14.48	0.05	35	71.457	1091	3899	666	31091
2998	-41	936	8.15	K0	13 26.848	0.16	4	70.584	-41 24 52.57	0.21	4	70.584				382
2999	-17	631	7.82	B3	13 27.343	--	1	71.008	-17 00 45.51	--	1	71.008			667	4962
3000	-35	1140	7.7	K5	13 29.176	0.10	4	70.583	-35 01 40.02	0.08	4	70.583				4963
3001	-33	1144	8.68	K0	3 13 30.994	0.16	4	71.022	-33 21 28.90	0.14	4	71.022		3906		4964
3002	-87	51	8.3	F8	13 32.209	0.11	4	69.794	-87 30 44.25	0.07	4	69.794				18731
3002	SP				13 32.096	0.13	5	70.343	-87 30 43.87	0.14	3	70.060				18731
3003	-15	568	8.4	G0	13 32.851	--	1	72.668	-14 58 55.20	--	1	72.668				4965
3004	-67	215	8.6	G5	13 34.022	0.10	4	69.284	-66 50 22.83	0.13	4	69.284				18732
3005	-25	1332	8.5	K0	3 13 36.598	0.04	4	70.379	-25 20 42.49	0.18	4	70.379				4966
3006	-39	963	8.8	K1	13 37.934	0.06	4	71.234	-38 52 54.52	0.16	4	71.234				4967
3007	-8	614	7.7	K2	13 39.689	0.05	2	70.928	-8 06 36.78	0.05	2	70.928				4968
3008	-26	1215	8.6	K0	13 41.113	0.14	4	70.033	-26 34 33.65	0.32	4	70.033				4969
3009	-27	1144	8.0	K2	13 45.555	0.07	4	70.609	-27 18 43.74	0.21	4	70.609				4970
3010	-19	643	8.0	K0	3 13 48.518	0.05	2	71.989	-19 32 18.45	0.03	2	71.989				4971
3011	-61	249	8.2	F2	13 50.572	0.11	4	69.780	-60 49 12.87	0.20	4	69.780				4972
3012	-39	965	7.6	K5	13 50.995	0.13	4	70.609	-39 14 48.38	0.09	4	70.609				4974
3013	-11	624	8.7	K0	13 51.008	--	1	72.660	-11 02 32.71	--	1	72.660				4973
3014	-12	627	7.0	K2	13 52.279	0.01	2	71.965	-12 10 09.96	0.10	2	71.965				4975
3015	-4	558	6.84	A2	3 13 57.539	0.08	2	71.907	-4 28 13.70	0.53	2	71.907		3915		4976
3016	-46	970	9.8	K5	14 01.989	0.11	4	70.922	-45 43 28.28	0.04	4	70.922				383
3017	-61	250	8.81	K0	14 06.146	0.24	4	70.028	-61 33 35.13	0.11	4	70.028		3916		4977
3018	-55	506	8.5	K0	14 06.632	0.19	4	69.760	-54 48 39.62	0.20	4	69.760				4978
3019	+2	510	8.8	K	14 09.866	0.12	2	72.317	+2 39 57.76	0.07	2	72.317				4979
3020	-9	627	6.16	F0	3 14 10.199	--	1	70.951	-9 20 17.70	--	1	70.951		3918		4980
3021	-79	96	8.8	K5	14 11.096	0.14	4	69.392	-79 34 28.47	0.25	4	69.392				18733
3021	SP				14 10.989	0.13	4	70.241	-79 34 28.39	0.23	4	70.241				18733
3022p	-58	274	8.5	K0	14 18.973	0.10	4	69.570	-58 00 19.54	0.14	4	69.570				4981
3023	-20	609	8.8	A5	14 20.658	0.14	4	71.502	-20 25 04.65	0.10	4	71.502				4982
3024*	-22	577	8.3	K0	3 14 35.050	0.10	4	70.814	-22 15 18.50	0.21	4	70.814				4983
3025	-32	1229	9.4	G0	14 43.656	0.06	4	70.583	-32 16 20.30	0.03	4	70.583				4984
3026	-83	64	7.59	F0	14 45.157	0.13	6	69.480	-83 43 04.28	0.10	6	69.480	3975	3931		33975
3026	SP				14 45.011	0.11	6	70.534	-83 43 04.47	0.16	6	70.534	3975	3931		53975
3027	-31	1305	6.89	A0	14 52.098	0.03	103	70.956	-31 32 04.95	0.03	103	70.956	1092	3932	673	31092
3028	-47	1003	8.6	G5	3 14 53.993	0.06	4	70.110	-47 28 41.72	0.18	4	70.110				384
3029	-16	606	9.0	F5	14 55.676	0.32	2	71.353	-16 14 45.15	0.10	2	71.353				4985
3030	+3	451	8.0	K0	15 08.369	0.03	2	71.761	+3 29 58.67	0.21	2	71.761				4986
3031*	-63	215	8.7	F5	15 22.891	0.19	4	69.098	-63 27 48.52	0.20	4	69.098				4987
3032	-6	643	8.8	F0	15 23.406	0.01	2	71.396	-6 05 55.44	0.09	2	71.396				4988

3022 SDS, 10.8m, 9°1, 157°.
 3024 SDS, 8.5m-11.1m, 1°4, 50°.

3031 SDS, 9.3m-9.5m, 0°4, 264°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
3033	-51	757	9.2	K2	3 15 28.024	0.08	4	70.266	-50 50' 09.72	0.22	4	70.266				385
3034	+ 4	522	8.1	A3	15 28.423	0.31	2	71.312	+ 4 47 15.55	0.47	2	71.312				4989
3035	-43	1022	8.4	K5	15 33.062	0.12	4	69.850	-43 35 22.77	0.22	4	69.850				386
3036	-10	649	6.8	G5	15 34.572	0.04	2	71.792	-10 37 28.38	0.04	2	71.792				4990
3037	-31	1310	9.5	G0	15 36.161	0.09	4	69.870	-31 25 24.80	0.21	4	69.870				4991
3038	-16	610	8.9	F5	3 15 36.590	0.13	2	72.222	-15 41 26.62	0.31	2	72.222				4992
3039	-50	981	8.6	G0	15 43.486	0.08	4	70.016	-50 09 03.54	0.15	4	70.016				387
3040	-39	971	8.2	M0	15 47.691	0.19	4	70.125	-39 08 38.42	0.10	4	70.125				4993
3041	-48	900	5.84	K0	15 48.659	0.17	6	69.930	-47 56 02.51	0.09	6	69.930	2233	3952	676	32233
3042	-46	987	9.0	M0	15 56.369	0.18	4	70.324	-46 23 01.75	0.15	4	70.324				388
3043	- 2	598	8.8	A5	3 15 59.700	0.13	2	71.768	- 1 47 55.91	0.04	2	71.768				4994
3044	-24	1569	8.2	A5	16 14.768	0.06	3	69.385	-24 16 59.65	0.16	3	69.385				4995
3045	-38	1090	8.04	G5	16 16.886	0.14	5	71.231	-38 33 39.79	0.09	5	71.231		3958		4996
3046	-55	512	8.6	K0	16 17.266	0.06	4	70.263	-55 39 51.77	0.22	4	70.263				4997
3047	-14	646	7.6	K0	16 20.400	0.03	2	71.840	-14 26 07.01	0.17	2	71.840				4998
3048	- 9	635	8.4	K2	3 16 23.750	0.01	2	72.424	- 8 46 40.05	0.07	2	72.424				4999
3049	- 5	618	8.7	K0	16 29.461	0.07	2	71.779	- 4 55 40.35	0.09	2	71.779				5000
3050	-16	614	7.80	K2	16 29.946	0.08	2	72.369	-15 43 56.86	0.42	2	72.369		3963		5001
3051	- 3	534	7.10	G0	16 30.279	0.02	2	72.268	- 3 01 25.04	0.25	2	72.268		3961		5002
3052	-40	863	8.2	K0	16 34.342	0.09	4	70.827	-40 10 28.97	0.12	4	70.827				389
3053	-53	548	9.01	G5	3 16 37.161	0.05	4	71.073	-53 02 14.34	0.08	4	71.073		3964		5003
3054	-42	1071	8.1	K0	16 37.901	0.15	4	71.462	-42 27 20.39	0.28	4	71.462				390
3055	-35	1161	8.20	K5	16 42.597	0.20	4	70.817	-35 20 54.01	0.09	4	70.817		3968		5004
3056	+ 2	518	4.96	G5	16 44.532	0.03	45	71.964	+ 3 11 19.30	0.04	45	71.964	1093	3969	679	31093
3057	-60	246	9.0	G5	16 45.554	0.19	5	71.176	-59 47 23.81	0.22	5	71.176				5005
3058	-49	914	9.1	K2	3 16 48.617	0.16	3	71.016	-49 10 39.15	0.20	3	71.016				391
3059	-61	251	8.2	K5	16 51.214	0.06	4	69.857	-61 13 20.60	0.16	4	69.857				5006
3060	-41	954	8.9	K2	16 55.537	0.06	4	70.613	-41 20 27.62	0.02	4	70.613				392
3061	-17	641	8.4	G5	17 04.346	-	1	71.929	-17 36 17.23	-	1	71.929				5007
3062	+ 0	565	7.40	K0	17 10.114	0.15	2	71.312	+ 1 01 06.69	0.30	2	71.312		3978		5008
3063	-77	134	5.53	F2	3 17 10.484	0.04	89	70.877	-77 34 16.27	0.04	87	70.877	1095	3977	681	31095
3063	SP				17 10.469	0.08	21	70.830	-77 34 16.50	0.22	19	70.733	1095	3977	681	51095
3064	-11	640	7.9	G5	17 11.874	0.01	2	71.808	-11 35 22.05	0.05	2	71.808				5009
3065	+28	516	4.72	K5	17 18.417	0.15	6	70.960	+28 52 06.65	0.09	6	70.960	2234	3981		32234
3066	-67	217	6.08	A2	17 24.662	0.12	6	69.439	-67 06 29.22	0.10	6	69.439	2235	3984		32235
3067	- 2	604	7.7	F5	3 17 29.996	0.11	2	71.325	- 1 46 20.10	0.40	2	71.325				5010
3068	-19	654	6.97	A0	17 30.168	0.04	2	71.377	-19 01 28.47	0.06	2	71.377		3990		5011
3069	-30	1280	9.5	K0	17 30.309	0.10	4	69.057	-30 02 36.83	0.13	4	69.057				5012
3070	- 3	538	8.8	F0	17 35.774	0.02	2	71.734	- 3 11 53.85	0.14	2	71.734				5013
3071	-34	1211	9.2	G5	17 39.507	0.12	4	71.278	-34 12 14.45	0.14	4	71.278				5014
3072	-70	220	8.5	K5	3 17 39.580	0.17	4	70.309	-70 39 41.21	0.15	4	70.309				18735
3073	-29	1230	7.5	K2	17 52.809	0.08	4	68.828	-29 10 20.16	0.05	4	68.828				5015
3074	-44	1075	9.2	K2	17 53.991	0.06	4	71.306	-44 25 30.40	0.13	4	71.306				393
3075	-45	1103	9.4	F5	17 55.926	0.10	4	70.857	-45 31 19.90	0.27	4	70.857				394
3076	-43	1028	4.30	G5	18 01.700	0.03	57	71.068	-43 15 20.28	0.04	57	71.068	119	4000	684	30119
3077	- 4	570	8.5	G5	3 18 07.870	0.04	2	71.347	- 4 31 57.64	0.07	2	71.347				5016
3078	-56	523	8.4	K0	18 08.185	0.10	4	69.746	-56 41 43.94	0.16	4	69.746				5017
3079	+20	543	5.17	B3	18 20.147	0.06	30	71.371	+20 58 05.15	0.05	29	71.386	1094	4007	686	31094
3080	-66	185	7.56	A2	18 29.694	0.18	4	69.778	-65 54 29.72	0.17	4	69.778		4011		18736
3081	- 0	532	8.5	K0	18 35.169	0.12	2	71.250	- 0 32 55.03	0.19	2	71.250				5018
3082	-26	1246	6.75	F0	3 18 36.109	0.24	4	68.637	-26 28 05.96	0.10	4	68.637		4012		5019
3083	- 0	533	8.5	K2	18 38.881	0.03	2	71.276	- 0 07 10.72	0.40	2	71.276				5021
3084	-36	1257	8.6	K0	18 38.882	0.24	4	70.116	-36 19 35.04	0.29	4	70.116				5020
3085	-73	208	8.5	K0	18 45.463	0.13	4	69.798	-73 14 41.51	0.13	3	69.459				18737
3086	-48	923	8.8	K2	18 49.735	0.04	4	70.038	-48 05 17.32	0.13	4	70.038				395
3087	-80	77	9.1	G5	3 18 53.499	0.12	4	68.820	-80 40 02.70	0.19	4	68.820				18738
3087	SP				18 53.619	0.19	4	71.195	-80 40 02.58	0.28	4	71.195				18738
3088	-34	1220	8.5	F5	18 58.418	0.11	4	70.132	-33 44 05.86	0.10	4	70.132				5022
3089	-60	248	7.84	G5	19 00.689	0.21	4	68.847	-60 40 28.75	0.17	4	68.847		4014		5023
3090	-37	1255	7.7	K5	19 04.336	0.08	4	70.115	-37 37 43.67	0.09	4	70.115				5024
3091	-78	94	9.1	K0	3 19 12.032	0.18	6	70.447	-78 40 50.83	0.12	6	70.447				18739
3091	SP				19 11.654	0.58	5	70.992	-78 40 51.21	0.26	4	70.929				18739
3092	- 8	637	8.9	A5	19 13.196	0.11	2	70.712	- 7 40 37.87	0.09	2	70.712				5025
3093	-67	219	9.0	F5	19 17.368	0.11	4	69.610	-67 20 18.92	0.10	4	69.610				18740
3094	+ 3	464	8.0	K0	19 27.570	0.07	2	71.320	+ 4 01 56.37	0.57	2	71.320				5026
3095	-71	202	8.0	K0	3 19 35.599	0.26	4	68.868	-71 37 17.06	0.23	4	68.868				18741
3096	-12	640	8.1	F5	19 35.700	0.04	2	71.305	-12 30 34.67	0.16	2	71.305				5027
3097	-53	552	8.5	G5	19 35.907	0.04	4	69.070	-53 14 03.18	0.17	4	69.070				5028
3098	-10	661	8.5	K0	19 36.760	0.19	2	70.812	- 9 49 43.13	0.19	2	70.812				5029
3099	-13	637	8.6	K0	19 44.757	0.04	2	70.485	-13 27 04.21	0.03	2	70.485				5030
3100	-20	626	8.4	K2	3 19 45.058	0.17	4	69.097	-20 13 28.33	0.05	4	69.097				5031
3101	- 6	663	8.3	F0	19 46.641	0.22	3	70.771	- 5 55 25.82	0.17	3	70.771				5032
3102	-22	593	8.4	K2	19 48.523	0.09	4	69.083	-22 16 40.54	0.17	4	69.083				5033
3103	-26	1257	6.26	A0	20 07.237	0.14	6	68.797	-25 45 56.45	0.13	6	68.797	2237	4031	688	32237
3104	-72	238	8.1	K0	20 09.787	0.21	4	69.058	-72 09 33.59	0.14	4	69.058				18742

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3105	-62	268	7.82	K0	3	20	14.833	0.06	4	69.780	-62 15' 09.46	0.11	4	69.780		4032			5034
3106	-2	611	8.5	K5		20	19.369	0.11	2	71.286	-2 14 11.12	0.07	2	71.286					5035
3107	-33	1191	9.2	G0		20	21.298	0.14	4	69.672	-33 10 18.92	0.13	4	69.672					5036
3108	-35	1198	8.9	K0		20	28.213	0.11	4	70.019	-34 49 06.83	0.19	4	70.019					5037
3109	-23	1354	9.0	G5		20	31.198	0.02	4	69.534	-23 08 18.46	0.18	4	69.534					5038
3110	-27	1199	8.0	G5	3	20	37.533	0.26	4	69.650	-27 24 56.76	0.06	4	69.650					5039
3111	-38	1115	8.57	K0		20	49.567	0.09	4	69.838	-38 38 11.52	0.09	4	69.838		4042			5040
3112	-17	654	6.68	K0		20	59.909	0.05	4	71.571	-17 37 00.16	0.07	4	71.571	2238	4044			5041
3113	+4	532	6.47	G0		21	00.923	0.03	2	71.843	+4 42 19.13	0.04	2	71.843		4045			5042
3114	+0	581	6.64	K0		21	01.829	0.11	4	71.611	+0 44 02.41	0.16	4	71.611	2239	4046			5043
3115	-29	1251	8.2	F8	3	21	02.177	0.08	4	69.823	-29 32 32.75	0.05	4	69.823					5044
3116	-59	268	7.5	K2		21	02.786	0.14	4	69.787	-58 52 32.98	0.12	3	69.444					5045
3117	-41	981	7.58	K5		21	07.603	0.11	4	69.854	-41 25 58.52	0.20	4	69.854		4047			396
3118	-16	628	8.4	K0		21	10.602	0.19	2	71.959	-16 26 58.36	0.11	2	71.959					5046
3119	+2	535	8.2	B9		21	18.399	0.13	2	71.961	+2 52 01.65	0.10	2	71.961					5047
3120	+24	481	5.66	K0	3	21	20.980	0.12	6	70.415	+24 32 53.34	0.17	6	70.415	2240	4051			32240
3121	-2	615	8.5	G0		21	23.209	0.16	2	71.510	-2 38 09.92	0.02	2	71.510					5048
3122	+12	473	6.22	G5		21	24.837	0.09	6	69.643	+12 27 12.39	0.13	6	69.643	2241	4056			32241
3123	-64	239	8.8	G5		21	26.582	0.08	4	70.114	-64 44 05.66	0.18	4	70.114					5049
3124	-54	547	8.7	K2		21	27.000	0.17	4	70.699	-54 37 36.76	0.10	4	70.699					5050
3125	-11	656	8.3	G5	3	21	30.078	0.04	3	72.193	-11 02 34.72	0.34	3	72.193					5051
3126	-28	1126	7.27	K0		21	33.399	0.03	4	69.813	-28 06 23.57	0.21	4	69.813		4058			5052
3127	-68	207	8.5	K0		21	39.088	0.16	4	70.307	-68 39 07.58	0.19	4	70.307					18743
3128	-32	1273	9.4	G0		21	45.394	0.16	4	70.757	-32 14 29.31	0.06	4	70.757					5053
3129	-66	189	7.7	A3		21	48.263	0.07	4	70.343	-65 57 31.82	0.23	4	70.343					18744
3130	-57	533	8.8	K0	3	21	49.835	0.08	4	70.885	-57 03 28.26	0.15	4	70.885					5055
3131	-15	592	9.0	K0		21	49.890	0.14	2	72.918	-15 20 52.58	0.19	2	72.918					5054
3132	-21	619	7.4	G5		21	54.011	0.09	4	69.806	-21 06 26.07	0.31	4	69.806					5056
3133	-42	1102	9.1	F8		21	54.488	0.10	4	70.569	-41 56 20.11	0.13	4	70.569					397
3134	-9	654	9.0	F8		21	55.841	--	1	72.845	-9 05 02.21	--	1	72.845					5057
3135	-31	1365	8.6	K2	3	21	56.095	0.15	3	70.753	-30 43 08.25	0.21	3	70.753					5058
3136	-75	231	8.08	A3		21	57.401	0.20	4	69.847	-74 46 18.56	0.11	4	69.847		4064			18745
3137	-56	529	8.9	K0		21	58.957	0.13	5	70.796	-56 07 28.78	0.14	5	70.796					5059
3138	-4	585	8.0	F0		22	02.165	0.19	2	72.420	-4 32 39.95	0.10	2	72.420					5060
3139f	-14	661	6.84	A0		22	03.839	0.25	2	72.860	-14 10 07.72	0.39	2	72.860		4067			5061
3140	-18	601	8.7	K0	3	22	05.241	--	1	72.681	-18 38 57.01	--	1	72.681					5062
3141	-24	1627	7.3	K0		22	05.862	0.12	4	70.559	-24 28 36.41	0.05	3	70.499					5063
3142	+8	511	3.80	G5		22	07.029	0.02	138	70.946	+8 51 13.62	0.03	137	70.946	121	4070	694		80121
3143	-37	1273	8.8	G5		22	07.794	0.09	4	70.548	-37 27 34.16	0.08	4	70.548					5064
3144	-66	190	8.7	K0		22	12.715	0.15	4	71.171	-65 44 00.32	0.07	4	71.171					18746
3145	+1	590	8.4	K5	3	22	20.355	0.18	2	72.208	+1 48 02.49	0.09	--	72.208					5065
3146	-69	187	8.6	K5		22	22.862	0.22	4	70.292	-69 29 20.31	0.27	4	70.292					18747
3147	-5	642	8.1	K0		22	31.352	0.07	2	72.822	-5 32 00.14	0.28	2	72.822		4076			5066
3148	-12	648	8.7	G0		22	35.309	0.15	2	72.916	-12 10 59.31	0.13	2	72.916					5067
3149	-4	586	7.41	G5		22	39.983	0.21	2	71.506	-4 39 14.17	0.01	2	71.506		4077	695		5068
3150	-26	1277	8.2	K0	3	22	42.830	0.05	6	70.347	-25 55 32.93	0.31	6	70.347					5069
3151	-7	596	8.6	F8		22	43.126	--	1	71.817	-7 54 39.54	--	1	71.817					5070
3152	+2	536	8.5	G5		22	44.094	0.15	2	71.947	+3 06 23.84	0.15	2	71.947					5071
3153	-46	1026	8.17	G5		22	48.218	0.13	4	70.323	-46 01 45.45	0.24	4	70.323		4079			398
3154	-82	63	8.5	K2		22	52.740	0.27	5	70.027	-81 55 44.91	0.19	5	70.027					18748
3154 SP					3	22	52.841	0.15	5	70.863	-81 55 45.07	0.09	4	70.767					18748
3155	-15	595	8.0	G5		22	55.631	0.01	2	71.380	-15 12 43.84	0.06	2	71.380		4083			5072
3156	-36	1284	9.2	K0		22	59.782	0.14	4	70.867	-36 23 12.57	0.10	4	70.867					5073
3157	-50	1026	8.4	K0		23	10.092	0.11	4	69.081	-50 10 53.13	0.07	3	68.503					399
3158	-25	1401	8.5	K5		23	13.744	0.07	4	69.777	-24 45 10.17	0.08	4	69.777					5074
3159	-48	946	8.7	K0	3	23	24.977	0.22	4	70.357	-48 06 36.69	0.16	4	70.357					400
3160	-45	1138	8.5	K0		23	39.310	0.10	4	70.168	-45 26 43.59	0.13	4	70.168					401
3161	-4	593	8.5	K2		23	42.270	0.04	2	71.380	-4 32 46.22	0.35	2	71.380					5075
3162	-39	1010	9.2	K0		23	44.231	0.03	4	70.344	-39 15 43.75	0.15	4	70.344					5076
3163	-1	495	8.5	F8		23	44.543	0.11	2	71.791	-1 12 33.11	0.18	2	71.791		4092	697		5077
3164	-63	224	8.9	K0	3	23	51.729	0.22	4	69.377	-63 12 47.83	0.12	4	69.377					5078
3165	-52	399	7.73	K0		23	58.927	0.15	4	69.346	-52 33 23.03	0.17	4	69.346		4096			5079
3166	-23	1389	9.0	K0		23	59.018	0.08	4	70.081	-23 04 29.22	0.26	4	70.081					5080
3167	-19	674	8.9	F5		23	59.302	0.13	2	71.818	-19 03 50.94	0.01	2	71.818					5081
3168	-14	669	8.6	K0		24	04.231	0.01	2	71.784	-14 19 01.14	0.11	2	71.784					5082
3169	-32	1287	9.0	K2	3	24	05.910	0.26	4	69.873	-31 50 07.59	0.11	4	69.873					5083
3170	-75	233	8.4	K5		24	09.114	0.16	4	70.712	-75 27 30.85	0.20	4	70.712					18749
3170 SP						24	09.155	0.28	4	70.825	-75 27 30.80	0.38	4	70.825					18749
3171	+18	484	6.45	A2		24	11.725	0.11	6	70.023	+18 34 58.63	0.14	6	70.023	2242	4103			32242
3172	-0	546	7.8	K5		24	15.460	0.19	2	71.328	-0 08 51.44	0.28	2	71.328					5084
3173	-10	679	8.8	A2	3	24	19.516	0.01	2	71.287	-9 41 33.67	0.17	2	71.287					5085
3174	-27	1230	8.6	K0		24	25.191	0.18	4	69.329	-27 09 35.30	0.09	4	69.329					5086
3175	+9	439	3.75	B8		24	27.420	0.03	99	71.910	+9 33 34.18	0.04	98	71.920	123	4107	702		30123
3176	-51	801	8.2	G5		24	28.290	0.09	4	69.627	-50 58 36.44	0.24	4	69.627					402
3177	-8	653	8.1	K0		24	29.033	0.14	2	71.299	-8 09 20.91	0.02	2	71.299					5087

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
3178	-44	1129	8.6	K2	3 24 29.101	0.10	5	70.033	-43 59 26.48	0.04	5	70.033				403
3179	-36	1294	9.3	K0	24 33.748	0.15	4	70.466	-35 46 17.59	0.23	4	70.466				5088
3180	-43	1069	7.5	K0	24 36.824	0.08	4	70.299	-43 00 38.37	0.11	4	70.299				404
3181	+ 1	597	7.7	A0	24 38.029	0.04	2	71.788	+ 2 06 24.95	0.03	2	71.788				5089
3182	-41	1006	8.14	K0	24 44.111	0.20	4	69.913	-40 44 36.57	0.18	4	69.913	4111			405
3183	-55	525	8.35	K2	3 25 00.888	0.09	4	69.535	-55 04 00.62	0.22	4	69.535		4114		5090
3184	-59	276	9.0	G8	25 16.465	0.14	4	69.592	-59 28 20.94	0.12	4	69.592				5091
3185	-14	677	7.16	A0	25 21.138	0.09	2	70.794	-14 32 21.72	0.19	2	70.794	4123			5092
3186	-28	1149	8.3	K0	25 21.234	0.11	4	69.080	-27 55 10.15	0.11	4	69.080				5093
3187	-69	192	5.96	F2	25 21.531	0.19	6	69.534	-69 30 39.24	0.09	6	69.534	2243	4124	704	32243
3188	-82	65	8.00	F5	3 25 27.508	0.11	4	69.978	-82 39 14.33	0.09	4	69.978		4125		18750
3188	SP				25 27.464	0.03	5	71.445	-82 39 14.57	0.41	4	71.266		4125		18750
3189	-55	527	8.9	G0	25 27.798	0.14	4	70.025	-55 38 25.85	0.26	4	70.025				5094
3190	-20	643	8.2	K5	25 36.527	0.19	2	71.324	-19 58 46.37	0.37	2	71.324		4128		5095
3191	-53	567	9.1	M0	25 36.682	0.07	4	70.027	-53 44 13.55	0.22	4	70.027				5096
3192	-36	1306	5.72	K0	3 25 37.219	0.12	6	70.481	-35 51 14.95	0.09	6	70.481	2244	4129		32244
3193	- 2	633	8.0	F5	25 37.301	0.10	2	71.305	- 2 39 07.08	0.26	2	71.305				5097
3194	-49	961	7.4	G5	25 38.444	0.14	4	69.855	-49 02 05.96	0.16	4	69.855				406
3195	-47	1056	9.3	K0	25 40.367	0.07	4	70.314	-47 08 24.43	0.11	4	70.314				407
3196	-32	1298	9.1	K0	25 40.932	0.10	4	70.332	-32 24 51.21	0.24	4	70.332				5098
3197	-13	656	7.7	K0	3 25 47.705	0.10	2	71.338	-12 55 35.37	0.02	2	71.338				5099
3198	-56	536	9.46	K	25 52.232	0.09	4	69.616	-56 36 01.83	0.08	4	69.616		4138		5101
3199	-68	213	9.0	G0	25 52.501	0.09	4	69.785	-67 47 23.65	0.13	3	69.441				18751
3200	- 7	603	8.4	G0	25 52.752	0.02	2	71.346	- 6 42 06.13	0.15	2	71.346		4139		5100
3201	+ 3	481	8.0	A0	26 05.362	--	1	70.951	+ 4 11 06.53	--	1	70.951				5102
3202	-29	1279	8.6	K2	3 26 08.402	0.15	4	68.851	-29 35 59.38	0.11	4	68.851				5103
3203	-57	546	8.9	K0	26 14.894	0.19	4	69.590	-57 18 38.98	0.21	4	69.590				5104
3204	-45	1150	7.7	K0	26 18.582	0.19	4	70.005	-45 44 00.66	0.16	4	70.005				408
3205	-36	1311	8.1	F2	26 24.404	0.15	4	70.348	-36 11 07.10	0.10	4	70.348				5105
3206	-37	1309	9.2	K0	26 25.256	0.22	4	70.331	-37 37 08.97	0.20	4	70.331				5106
3207	+ 2	552	6.54	G5	3 26 27.148	0.32	2	71.306	+ 3 04 37.23	0.14	2	71.306		4151	707	5107
3208	-20	646	8.9	F8	26 39.596	0.08	4	69.074	-20 09 04.60	0.14	4	69.074				5108
3209	-65	241	8.4	K2	26 40.652	0.18	4	69.571	-64 49 17.86	0.30	4	69.571				18752
3210	-33	1239	9.1	G0	26 44.172	0.09	4	70.267	-33 22 44.24	0.13	4	70.267				5109
3211	-42	1128	9.3	G5	26 46.472	0.20	4	70.150	-41 46 49.03	0.08	4	70.150				409
3212	-79	102	8.5	M1	3 27 01.373	0.07	4	69.811	-78 50 22.45	0.22	4	69.811				18753
3212	SP				27 01.357	0.10	4	70.226	-78 50 21.54	0.56	4	70.226				18753
3213	-21	636	8.2	K2	27 04.297	0.23	3	69.230	-21 32 32.46	0.23	3	69.230				5110
3214	-58	285	6.70	K5	27 07.580	0.11	7	70.253	-58 03 13.77	0.10	6	70.142	2245	4160		32245
3215	-77	136	8.9	K5	27 09.649	0.20	4	69.838	-76 47 20.67	0.21	4	69.838				18754
3215	SP				3 27 09.562	0.18	4	70.413	-76 47 20.14	0.49	4	70.413				18754
3216	-13	662	5.59	A2	27 14.212	0.09	6	69.429	-12 50 45.00	0.13	6	69.429	2246	4164		32246
3217	-17	677	8.7	F5	27 15.350	0.01	2	71.250	-17 10 11.46	0.07	2	71.250				5111
3218	-32	1308	8.8	K0	27 17.316	0.24	4	69.563	-31 50 32.74	0.04	4	69.563				5112
3219	-34	1288	8.7	K0	27 17.345	0.20	4	69.861	-34 31 26.61	0.10	4	69.861				5113
3220	-38	1155	8.7	G5	3 27 18.920	0.14	4	69.868	-38 10 58.24	0.15	4	69.868				5114
3221	-29	1287	8.5	K0	27 31.197	0.06	4	69.337	-28 44 15.77	0.10	4	69.337				5115
3222	-39	1043	9.4	K0	27 36.840	0.25	4	70.133	-39 18 12.15	0.20	4	70.133				5116
3223	+ 0	600	8.8	G0	27 39.224	0.32	2	70.767	+ 0 54 14.89	0.05	2	70.767				5117
3224	-61	264	8.3	G5	27 41.129	0.33	4	69.185	-61 21 39.09	0.15	4	69.185				5118
3225	- 3	564	8.7	F5	3 27 43.861	0.14	2	71.313	- 3 08 58.71	0.13	2	71.313				5119
3226	-24	1686	8.4	K2	27 44.297	0.17	4	69.307	-23 54 59.68	0.17	4	69.307				5120
3227	-60	253	9.3	M0	27 44.645	0.16	4	69.713	-60 08 52.92	0.21	4	69.713				5121
3228	+ 1	608	8.6	F2	27 58.771	0.07	2	71.794	+ 1 54 35.79	0.32	2	71.794				5122
3229	-26	1318	8.4	K5	28 00.203	0.09	4	69.319	-26 29 45.61	0.09	4	69.319				5123
3230	+ 5	502	6.12	G5	3 28 05.952	0.11	6	71.121	+ 6 01 07.90	0.21	6	71.121	2247	4183		32247
3231	+12	486	4.28	K0	28 06.512	0.07	2	72.416	+12 46 00.13	0.23	2	72.416	125	4184	714	30125
3232	- 5	674	4.80	B9	28 08.067	0.05	23	71.551	- 5 14 43.03	0.06	23	71.551	1097	4185	715	31097
3233	-55	533	8.93	K5	28 11.849	0.12	3	70.083	-54 57 10.30	0.30	3	70.083		4190		5124
3234	-16	648	9.0	G5	28 12.336	0.15	2	72.207	-16 01 23.35	0.13	2	72.207				5125
3235	-10	691	7.04	K0	3 28 15.929	0.02	2	71.306	- 9 54 02.03	0.34	2	71.306		4192		5126
3236	-41	1029	6.10	F5	28 26.563	0.09	6	71.153	-41 32 19.22	0.11	6	71.153	2248	4199	716	32248
3237	- 0	560	6.63	A0	28 30.767	0.08	2	71.835	- 0 39 02.60	0.31	2	71.835		4202		5127
3238	-63	234	4.80	F5	28 31.098	0.03	82	70.980	-63 06 39.91	0.03	81	70.982	126	4200	717	30126
3239	- 6	690	8.3	G5	28 32.722	0.17	2	72.204	- 5 47 59.78	0.22	2	72.204			718	5129
3240	-30	1356	8.3	F0	3 28 32.761	0.04	5	69.558	-30 30 17.22	0.13	4	69.558				5128
3241	-18	622	7.58	K0	28 33.144	0.04	2	71.823	-18 38 08.44	0.03	2	71.823		4203		5130
3242	- 2	648	8.6	K0	28 33.308	0.05	2	71.366	- 2 25 00.60	0.12	2	71.366				5131
3243	+ 2	556	8.5	F0	28 49.283	0.11	2	71.973	+ 2 29 34.19	0.32	2	71.973				5132
3244	-13	674	7.56	A0	28 49.982	0.25	2	72.223	-13 40 06.20	0.40	2	72.223			719	5133
3245	-32	1324	9.0	K2	3 28 50.637	0.13	4	69.879	-32 40 30.72	0.15	4	69.879				5135
3246	-11	679	8.4	K0	28 50.651	0.19	2	71.816	-11 06 03.69	0.36	2	71.816				5134
3247	-42	1142	9.4	F8	28 53.331	0.18	4	69.978	-42 41 30.51	0.21	4	69.978				410
3248	-47	1071	6.01	A0	29 00.735	0.09	7	70.839	-47 32 42.12	0.16	6	70.826	2250	4212	720	32250
3249	-17	685	7.56	F5	29 07.681	0.17	2	71.921	-16 56 54.24	0.32	2	71.921		4216		5136

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	PK4	GC	N30	No*
3250	-4	613	7.3	G5	29 09.609	0.04	2	71.277	-3 40 00.16	0.11	2	71.277				5137
3251	-40	959	9.0	G5	29 14.323	0.18	5	71.161	-40 41 07.72	0.07	5	71.161				411
3252	-45	1170	9.3	G5	29 17.198	0.10	4	70.595	-44 47 35.85	0.15	4	70.595				412
3253	-48	990	8.7	K5	29 29.360	0.12	4	70.321	-48 18 23.08	0.03	4	70.321				413
3254	-19	698	8.5	K2	29 33.837	0.03	2	71.876	-19 29 05.68	0.13	2	71.876				5138
3255	-0	561	8.6	K0	29 34.846	0.25	2	72.021	+0 07 11.76	0.01	2	72.021				5139
3256	-8	666	7.8	A0	29 36.294	0.04	2	71.372	-8 00 30.90	0.08	2	71.372				5140
3257	-9	691	8.9	F0	29 36.999	-	1	71.008	-8 58 47.71	-	1	71.008				5141
3258	-44	1169	8.2	K5	29 40.548	0.21	4	70.137	-44 00 09.62	0.08	4	70.137				414
3259	+3	488	8.8	K2	29 47.533	0.19	2	72.014	+4 13 41.45	0.08	2	72.014				5142
3260	-36	1335	9.1	G0	29 49.690	0.09	4	70.781	-35 52 20.14	0.09	4	70.781				5143
3261	-51	829	9.4	K0	29 58.206	0.14	4	70.568	-51 42 36.79	0.06	4	70.568				415
3262	-55	537	7.10	K5	30 00.014	0.05	6	70.165	-55 25 05.59	0.08	6	70.165	2253	4233		32253
3263	+2	557	8.2	K0	30 02.090	0.04	2	71.812	+2 58 54.26	0.40	2	71.812				5144
3264	-12	672	8.3	F2	30 03.999	0.02	2	71.788	-12 08 00.32	0.04	2	71.788				5145
3265	-50	1065	8.2	K0	30 05.679	0.06	4	70.812	-50 16 24.25	0.06	3	70.812				416
3266	-68	216	8.9	K0	30 10.370	0.25	4	69.071	-68 22 02.29	0.11	4	69.071				18755
3267	-4	619	8.4	K0	30 13.001	0.06	2	72.397	-4 35 18.24	0.01	2	72.397				5146
3268	-35	1270	8.6	K0	30 26.141	0.11	4	71.012	-35 08 07.25	0.11	4	71.012				5147
3269	-65	248	8.61	G5	30 26.843	0.05	4	70.551	-64 49 14.23	0.11	4	70.551		4241		18756
3270	-43	1096	9.6	G5	30 30.216	0.26	4	71.155	-43 05 11.35	0.08	4	71.155				417
3271	-1	508	8.5	G5	30 31.199	0.31	2	72.204	-1 27 47.14	0.14	2	72.204				5148
3272	-9	697	3.81	K0	30 32.930	0.05	20	71.699	-9 37 34.33	0.08	20	71.699	127	4244	726	30127
3273	-49	991	7.5	K0	30 33.581	0.10	3	70.241	-49 19 38.51	0.10	3	70.241				418
3274	-13	679	8.8	K2	30 34.705	-	1	72.809	-13 24 04.92	-	1	72.809				5149
3275	-58	291	9.0	G5	30 34.897	0.09	4	71.137	-58 33 24.43	0.14	4	71.137				5150
3276	-66	196	7.9	K5	30 36.035	0.18	4	70.411	-66 27 36.26	0.14	4	70.411				18757
3277	-2	652	7.5	G5	30 40.201	-	1	71.932	-2 01 41.31	-	1	71.932				5151
3278	-51	833	8.4	G5	30 41.686	0.10	4	70.316	-50 59 15.65	0.12	4	70.316				419
3279	-4	621	8.4	G5	30 55.432	-	1	72.741	-4 33 04.08	-	1	72.741				5152
3280	-70	237	8.6	K5	31 04.779	0.19	4	70.865	-70 38 29.87	0.35	4	70.865				18758
3281	-50	1071	5.60	K0	31 05.391	0.03	66	70.726	-50 32 49.49	0.04	65	70.723	128	4251	728	30128
3282	-0	565	8.7	K0	31 07.424	-	1	70.910	-0 33 54.69	-	1	70.910				5153
3283	-32	1346	8.9	G5	31 19.198	0.11	4	71.218	-32 40 21.76	0.29	3	71.386				5154
3284	-72	247	8.2	F5	31 20.074	0.14	4	70.512	-72 32 28.52	0.16	4	70.512				18759
3285	-66	197	8.2	K0	31 25.137	0.08	4	70.173	-65 48 48.00	0.06	4	70.173				18760
3286	-15	617	7.08	F5	31 26.131	0.35	2	72.493	-15 17 37.67	0.54	2	72.493		4255		5155
3287	-29	1318	8.6	F0	31 26.579	0.16	4	69.059	-29 10 11.05	0.11	4	69.059				5156
3288	-47	1081	8.6	G0	31 26.792	0.08	4	70.575	-46 53 22.38	0.14	4	70.575				420
3289	-81	83	7.76	K0	31 27.605	0.11	5	69.854	-80 52 43.59	0.15	5	69.854		4256		18761
3289 SP					31 27.593	0.12	5	70.652	-80 52 43.31	0.15	4	70.505		4256		18761
3290	-37	1347	9.0	K0	31 30.135	0.21	4	70.666	-37 16 19.68	0.36	4	70.666				5157
3291	-22	628	4.32	B8	31 34.735	0.02	138	70.768	-21 47 58.43	0.03	136	70.790	1099	4258	729	81099
3292	-7	627	8.1	K0	31 48.373	0.16	2	72.459	-6 41 14.36	0.20	2	72.459				5158
3293	-53	579	9.1	M0	31 51.828	0.07	4	69.118	-53 34 39.57	0.04	4	69.118				5159
3294	-45	1188	8.5	K2	31 53.163	0.16	4	70.816	-44 45 02.40	0.24	4	70.816				421
3295	-61	267	6.29	G5	31 54.245	0.20	6	69.500	-61 11 04.40	0.10	6	69.500	2256	4265		32256
3296	-33	1276	8.9	K0	31 55.402	0.08	4	71.250	-33 36 14.05	0.14	4	71.250				5160
3297	-38	1188	8.79	G5	31 57.338	0.11	4	71.083	-38 12 02.99	0.36	4	71.083		4267		5161
3298	-15	620	8.6	K0	32 00.488	0.26	2	71.930	-14 52 36.58	0.21	2	71.930				5162
3299	+0	608	8.6	G5	32 00.620	-	1	71.891	+0 30 51.89	-	1	71.891				5163
3300	-42	1158	9.3	K2	32 06.759	0.13	4	70.376	-42 19 05.97	0.08	4	70.376				422
3301	-7	629	8.3	K5	32 12.587	0.16	2	72.422	-7 32 30.96	0.09	2	72.422				5164
3302	-10	704	6.27	A0	32 13.078	-	1	71.030	-10 02 03.88	-	1	71.030		4272		5165
3303	+2	563	8.0	K0	32 16.520	0.02	2	71.941	+3 11 40.79	0.60	2	71.941				5166
3304	-3	576	7.4	A2	32 23.394	0.15	3	70.773	-3 34 39.96	0.06	3	70.773				5167
3305	-16	662	8.6	K0	32 24.348	0.03	2	71.310	-16 24 07.31	0.03	2	71.310				5168
3306	-22	631	8.9	K5	32 26.034	0.07	4	70.311	-22 18 39.51	0.08	4	70.311				5169
3307	-5	695	8.5	K5	32 37.376	0.30	2	71.351	-5 03 51.35	0.19	2	71.351				5170
3308	+1	621	8.6	M0	32 37.809	0.31	2	71.540	+1 36 49.93	0.14	2	71.540				5171
3309	-1	513	9.0	G5	32 39.722	-	1	70.984	-0 54 13.10	-	1	70.984				5172
3310	-54	567	7.50	K0	32 51.676	0.04	4	70.342	-54 40 40.26	0.21	3	70.184		4286		5173
3311	-9	707	8.9	K0	32 51.723	0.11	2	71.324	-8 56 01.73	0.15	2	71.324				5174
3312	-62	279	7.5	G5	32 56.635	0.16	4	70.031	-62 20 00.91	0.14	4	70.031				5175
3313	-60	258	8.1	G5	33 03.304	0.18	4	70.561	-60 18 26.12	0.26	4	70.561				5176
3314	-52	419	9.0	K5	33 05.204	0.11	4	69.587	-52 17 23.30	0.15	4	69.587				5177
3315	-25	1465	8.3	K2	33 09.024	0.09	4	70.278	-25 03 41.32	0.07	4	70.278				5178
3316	-11	694	8.7	K5	33 09.582	0.54	2	71.444	-11 14 24.83	0.15	2	71.444				5179
3317	-36	1353	7.80	K2	33 11.564	0.12	4	69.867	-36 06 11.53	0.29	4	69.867		4288		5180
3318	-63	237	9.0	K5	33 11.627	0.19	4	70.287	-62 56 16.39	0.19	4	70.287				5181
3319	-24	1754	8.5	K2	33 11.871	0.12	4	70.649	-24 06 43.12	0.15	4	70.649				5182
3320	-28	1205	8.5	A3	33 19.797	0.13	4	70.832	-28 30 03.28	0.33	4	70.832				5183
3321	-26	1352	8.2	F0	33 23.923	0.28	3	71.112	-26 35 42.54	0.20	3	71.112				5184
3322	-9	709	8.6	G5	33 23.932	0.30	2	72.026	-9 13 27.39	0.09	2	72.026		4292		5185
3323	-10	708	8.7	K0	33 31.302	0.17	2	71.433	-10 21 19.65	0.38	2	71.433				5186

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3324	-20	677	8.5	A2	3 33 40.934	0.07	4	70.747	-20 19 01.41	0.21	4	70.747				5187
3325	-31	1460	8.5	G5	33 42.245	0.07	4	70.372	-31 18 53.14	0.10	4	70.372				5188
3326	-48	1013	9.4	G5	33 47.558	0.29	4	69.825	-48 16 48.04	0.15	4	69.825				423
3327	-17	697	8.2	G0	33 51.023	0.14	2	71.922	-17 14 52.95	0.08	2	71.922				5189
3328	-58	299	7.47	K0	33 59.910	0.07	4	68.563	-57 58 32.67	0.10	4	68.563		4304		5190
3329	-17	699	5.32	A0p	3 34 00.651	0.03	56	71.492	-17 37 53.23	0.04	54	71.516	1100	4305	739	31100
3330	-3	581	8.9	K0	34 03.052	--	1	72.760	-2 58 51.53	--	1	72.760				5191
3331	-19	708	8.0	A0	34 10.302	0.03	2	72.477	-19 32 28.09	0.12	2	72.477				5192
3332	-0	572	4.40	G5	34 18.765	0.06	13	71.919	+ 0 14 29.14	0.11	13	71.919	1101	4313	741	31101
3333	-14	706	8.1	G5	34 27.637	0.05	2	72.353	-14 15 44.34	0.02	2	72.353				5193
3334	-35	1298	8.8	G5	3 34 34.361	0.08	4	70.603	-34 57 13.19	0.15	4	70.603				5194
3335	-22	635	8.1	K0	34 38.458	0.11	4	69.841	-22 38 55.40	0.12	4	69.841				5195
3336	-45	1202	9.2	K0	34 39.283	0.08	4	70.570	-45 36 43.01	0.16	4	70.570				424
3337	-47	1097	7.9	K0	34 39.384	0.17	4	70.142	-47 21 55.39	0.10	4	70.142				425
3338	-39	1098	9.3	F5	34 52.984	0.28	5	70.806	-39 32 51.16	0.22	5	70.806				5196
3339	-18	639	8.6	G5	3 34 53.566	--	1	72.790	-18 02 24.25	--	1	72.790				5197
3340	-68	222	8.8	G5	34 54.163	0.20	4	69.996	-68 01 39.07	0.13	4	69.996				18762
3341	+0	622	8.0	K0	35 03.619	0.19	2	72.267	+ 0 57 33.17	0.07	2	72.267				5198
3342	-53	587	7.48	K0	35 06.813	0.05	5	70.536	-52 56 30.37	0.23	5	70.536		4327		5199
3343	+3	503	7.7	A5	35 12.273	0.13	2	72.420	+ 3 58 55.83	0.20	2	72.420				5200
3344*	-41	1075	8.6	K0	3 35 16.990	0.08	4	70.856	-41 03 38.46	0.11	4	70.856				426
3345	-30	1408	8.3	K0	35 17.664	0.14	4	70.336	-30 20 47.49	0.13	4	70.336				5202
3346	-40	1008	4.58	K0	35 17.913	0.07	18	71.301	-40 26 16.28	0.09	17	71.200	130	4329	743	30130
3347	-38	1214	8.9	K0	35 19.593	0.07	4	71.387	-38 35 16.09	0.21	4	71.387				5203
3348	-50	1090	7.54	G0	35 23.934	0.11	5	70.822	-50 07 17.59	0.14	5	70.822		4331		427
3349	-61	271	9.3	K5	3 35 26.679	0.13	4	70.607	-61 39 18.76	0.13	4	70.607				5204
3350	-69	202	8.4	M1	35 41.996	0.14	4	70.110	-69 21 25.08	0.10	4	70.110				18763
3351	-31	1478	9.2	G0	36 04.386	0.02	3	70.804	-31 10 24.44	0.19	3	70.804				5208
3352	-49	1026	7.3	K2	36 14.481	0.08	4	70.902	-49 10 05.82	0.17	4	70.902				428
3353	-34	1344	9.1	K0	36 19.017	0.24	2	69.849	-34 29 29.80	0.06	2	69.849				5211
3354	-46	1107	9.8	G0	3 36 27.958	0.22	3	70.741	-46 14 15.71	0.07	3	70.741				429
3355	-21	665	8.8	K2	36 30.461	0.13	2	69.526	-21 28 40.05	0.09	2	69.526				5212
3356	-37	1378	8.6	F0	36 30.683	0.23	4	71.073	-36 47 14.72	0.30	4	71.073				5213
3357	-37	1379	8.1	G5	36 31.945	0.11	4	70.830	-37 26 05.25	0.16	4	70.830				5214
3358	-20	684	7.5	K0	36 35.660	0.12	3	70.493	-20 22 39.72	0.22	3	70.493				5215
3359	+16	484	6.33	G5	3 36 35.863	0.11	6	71.147	+16 22 31.16	0.17	6	71.147	2257	4348		32257
3360	-26	1375	7.8	K2	36 39.951	0.09	3	71.578	-25 46 13.50	0.29	2	71.996				5216
3361	-68	224	7.92	G5	36 40.246	0.06	4	71.393	-68 36 03.85	0.17	4	71.393		4349		18764
3362	-28	1225	6.08	A0	36 42.808	0.04	20	70.408	-28 06 18.85	0.07	20	70.408	1102	4351	746	81102
3363	-35	1311	7.08	K0	36 46.889	0.15	4	70.763	-35 21 58.54	0.54	4	70.763		4353		5217
3364	-74	268	7.6	K0	3 36 47.822	0.08	4	70.579	-74 08 14.99	0.12	4	70.579				18765
3365	-24	1787	8.7	K0	36 50.466	0.19	2	69.866	-24 14 58.22	0.30	2	69.866				5218
3366	-43	1122	8.6	K2	36 50.748	0.20	3	69.997	-42 50 27.86	0.18	3	69.997				430
3367	-73	234	8.4	K0	36 52.395	0.05	5	71.460	-73 33 30.28	0.13	4	71.621				18766
3368	-57	564	7.35	K5	36 56.316	0.06	4	71.277	-57 26 51.27	0.11	4	71.277		4355		5219
3369	-28	1227	8.34	K0	3 36 58.991	0.05	3	71.107	-28 10 53.73	0.03	3	71.107		4357		5220
3370	-36	1380	8.0	K0	37 03.902	0.06	4	70.665	-35 47 50.81	0.15	4	70.665				5222
3371	-16	679	8.1	K0	37 08.007	--	1	71.030	-15 55 08.12	--	1	71.030				5223
3372	-8	696	8.2	K2	37 12.783	--	1	72.799	- 8 00 01.39	--	1	72.799				5225
3373	-41	1085	8.3	K2	37 14.557	0.12	4	70.589	-40 47 34.44	0.07	4	70.589				431
3374	+2	581	5.76	G5	3 37 14.624	0.04	6	71.369	+ 2 53 44.35	0.14	6	71.369	2258	4365		32258
3375	-56	559	8.56	G5	37 19.259	0.20	4	70.325	-56 18 18.08	0.16	4	70.325		4366		5226
3376	-7	654	6.99	A2	37 19.914	--	1	72.845	- 6 56 18.70	--	1	72.845		4367		5227
3377	-17	707	7.06	K0	37 20.119	--	1	72.681	-17 31 34.11	--	1	72.681		4368		5228
3378	-49	1037	9.2	K0	37 21.236	0.12	4	70.909	-48 50 43.71	0.21	4	70.909				432
3379	-13	707	8.7	K0	3 37 26.058	--	1	70.997	-13 25 12.34	--	1	70.997				5229
3380	-27	1322	8.6	K0	37 28.477	0.16	4	70.020	-27 31 30.88	0.09	4	70.020				5230
3381	-29	1363	8.1	K2	37 29.335	0.13	4	69.808	-29 15 47.74	0.28	4	69.808			748	5231
3382	-11	706	7.08	G5	37 30.000	--	1	72.837	-11 06 27.74	--	1	72.837		4372		5232
3383	-39	1123	9.3	F5	37 39.638	0.16	4	70.459	-39 16 56.34	0.08	4	70.459				5234
3384	-9	719	6.96	F5	3 37 45.706	0.16	2	71.866	- 9 11 59.82	0.03	2	71.866		4381		5235
3385	+24	529	6.15	A0	37 46.787	0.08	4	72.040	+25 10 09.10	0.18	4	72.040	1103	4382	750	31103
3386	+4	571	6.73	G5	37 49.453	0.15	2	71.824	+ 4 57 55.33	0.16	2	71.824		4385		5237
3387	-3	592	6.74	F8	37 50.140	0.04	2	71.839	- 3 22 33.57	0.41	2	71.839		4384		5236
3388	-15	634	6.44	G5	37 52.641	0.09	6	69.943	-15 23 13.42	0.21	6	69.943	2259	4388		32259
3389	-5	715	5.52	B8	3 38 09.644	0.09	6	70.495	- 5 22 15.36	0.10	6	70.495	2260	4395		32260
3390	-72	253	8.7	K0	38 12.608	0.11	4	69.786	-71 55 17.89	0.08	4	69.786				18767
3391	-77	143	8.39	K0	38 14.973	0.21	4	70.153	-77 15 09.01	0.15	4	70.153		4397		18768
3391 SP					38 15.005	0.29	4	71.022	-77 15 08.72	0.30	3	71.164		4397		18768
3392	-4	647	8.3	F0	38 16.544	0.07	2	71.354	- 4 18 22.36	0.11	2	71.354				5238
3393	-30	1432	9.1	K5	3 38 20.760	0.18	4	69.858	-30 40 07.37	0.15	4	69.858				5239
3394	-78	105	6.08	K0	38 21.187	0.02	155	71.080	-78 29 07.55	0.03	154	71.081	2261	4400		62261
3394 SP					38 21.161	0.03	138	71.390	-78 29 07.56	0.06	131	71.407	2261	4400		72261
3395	-19	724	6.90	G5	38 25.698	0.08	2	71.318	-19 37 59.91	0.42	2	71.318		4402		5240
3396	-15	636	8.4	K0	38 27.744	--	1	70.984	-14 53 09.06	--	1	70.984				5241

3344 8.6m-11.3m, 1°6, 336°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
3397	+ 2	584	7.9	K0	3 38 28.459	0.34	2	71.298	+ 2 47 25.95	0.14	2	71.298				5242
3398	+ 3	514	8.3	K0	38 32.180	0.16	2	71.267	+ 4 01 33.69	0.12	2	71.267				5243
3399	-79	109	6.79	K0	38 35.553	0.08	4	70.504	-79 15 38.77	0.19	4	70.504		4409		18769
3399	SP				38 35.598	0.08	4	70.391	-79 15 39.66	0.27	4	70.391		4409		18769
3400	-12	689	6.50	F2	38 51.409	0.14	2	71.291	-11 57 44.29	0.22	2	71.291		4415		5244
3401	-58	306	8.7	A2	3 38 51.416	0.11	4	68.802	-58 10 45.39	0.16	4	68.802				5245
3402	- 9	724	8.8	K0	38 57.346	0.19	2	71.343	- 9 21 10.43	0.09	2	71.343		4417		5246
3403	-32	1416	9.0	G5	38 57.356	0.10	4	70.032	-32 15 46.48	0.06	4	70.032				5247
3404	-19	725	8.6	K0	38 58.339	0.08	2	71.347	-19 33 03.51	0.40	2	71.347				5248
3405	- 0	585	8.6	A0	39 04.568	0.02	2	71.308	- 0 19 21.93	0.05	2	71.308				5249
3406	-35	1342	8.5	K0	3 39 16.009	0.13	6	71.094	-35 03 56.36	0.13	6	71.094				5250
3407	-54	576	8.20	G5	39 21.024	0.17	4	69.039	-53 53 52.43	0.06	4	69.039		4426		5251
3408	+19	578	5.50	B8	39 25.631	0.13	6	69.874	+19 32 29.39	0.15	6	69.874	2263	4430		32263
3409	- 6	728	8.7	K5	39 30.160	0.04	2	71.787	- 6 34 39.21	0.19	2	71.787				5252
3410	-17	713	9.0	G0	39 33.291	0.09	2	71.385	-17 12 38.06	0.07	2	71.385				5253
3411	-14	732	6.98	A0	3 39 34.678	0.02	2	71.365	-14 31 19.43	0.08	2	71.365		4431		5254
3412	+ 2	587	8.2	G5	39 36.406	0.19	2	71.413	+ 3 16 26.14	0.09	2	71.413				5255
3413	-33	1331	8.8	K0	39 42.237	0.10	4	70.625	-33 33 04.29	0.10	4	70.625				5256
3414	-24	1820	8.3	A0	39 50.868	0.12	4	69.067	-23 48 12.44	0.15	4	69.067				5257
3415	-82	70	9.2	G0	39 59.369	0.11	4	70.130	-82 28 33.53	0.13	4	70.130				18770
3415	SP				3 39 59.251	0.13	4	70.938	-82 28 33.52	0.09	4	70.938				18770
3416	-44	1239	8.1	K0	40 09.050	0.18	4	70.337	-43 55 35.77	0.12	4	70.337				433
3417	- 5	724	7.7	B9	40 14.331	0.16	2	71.940	- 4 45 49.83	0.11	2	71.940				5258
3418	-32	1430	4.93	B5	40 15.495	0.03	98	71.220	-32 05 49.03	0.03	98	71.220	133	4439	755	30133
3419	-40	1044	9.5	K0	40 22.085	0.22	3	69.966	-40 12 28.88	0.21	3	69.966				434
3420	-56	570	8.9	K0	3 40 23.446	0.12	4	69.024	-55 50 01.56	0.03	4	69.024				5259
3421	-64	261	8.8	G5	40 25.060	0.09	4	68.863	-64 02 46.17	0.07	4	68.863				18771
3422	-81	88	7.84	K0	40 31.971	0.19	4	69.668	-81 00 54.25	0.13	4	69.668		4444		18772
3422	SP				40 32.084	0.09	4	70.329	-81 00 54.06	0.16	4	70.329		4444		18772
3423	-46	1143	6.55	F5	40 33.298	0.08	6	70.095	-46 06 58.98	0.11	6	70.095	2264	4445		32264
3424	-23	1529	8.4	K0	3 40 38.762	0.16	4	69.592	-23 04 05.81	0.22	3	69.209				5260
3425	-49	1058	7.5	K0	40 43.470	0.08	3	70.276	-49 18 36.48	0.02	3	70.276				435
3426	- 0	590	8.6	G0	40 50.508	0.11	2	71.988	+ 0 17 15.36	0.15	2	71.988				5261
3427	-10	728	3.72	K0	40 50.893	0.03	87	71.110	- 9 55 37.22	0.03	86	71.112	135	4450	756	80135
3428	-37	1415	4.64	K2	40 58.601	0.13	6	70.167	-37 28 14.79	0.11	6	70.167	2265	4455	757	32265
3429	-12	698	8.8	K5	3 40 59.517	0.26	2	71.984	-11 52 10.58	0.53	2	71.984				5262
3430	- 4	655	8.5	A0	41 25.150	--	1	71.940	- 4 26 11.87	--	1	71.940				5263
3431	- 8	710	7.8	G5	41 28.781	--	1	71.008	- 8 02 22.41	--	1	71.008				5264
3432	- 2	707	8.3	K0	41 34.995	--	1	71.834	- 2 07 42.29	--	1	71.834				5265
3433	-40	1054	9.3	K2	41 38.792	0.11	5	70.803	-39 46 49.07	0.16	5	70.803				5266
3434	-54	583	8.6	K0	3 41 48.098	0.13	5	70.468	-54 37 45.65	0.13	5	70.468				5267
3435	-52	441	7.8	G5	41 50.061	0.18	4	70.364	-52 24 18.01	0.08	4	70.364				5268
3436	+23	507	3.81	B5p	41 54.098	0.05	10	71.961	+23 57 26.69	0.15	10	71.961	136	4477	764	30136
3437	-29	1401	7.14	A2	41 54.370	0.07	4	70.091	-28 47 06.46	0.05	4	70.091		4478		5269
3438	- 1	526	5.09	B8	41 57.953	0.07	13	71.061	- 1 19 10.25	0.08	13	71.061	137	4481	766	30137
3439	- 3	605	8.9	K0	3 42 00.594	--	1	72.681	- 3 39 14.64	--	1	72.681				5270
3440	-41	1117	10.0	G0	42 02.802	0.13	3	70.840	-41 31 37.55	0.19	3	70.840				436
3441	-47	1143	9.4	F8	42 03.930	0.17	4	70.618	-47 19 33.55	0.13	4	70.618				437
3442	+ 1	656	8.1	K2	42 04.668	--	1	71.976	+ 1 46 56.60	--	1	71.976				5271
3443	-34	1387	9.3	K0	42 06.408	0.07	4	70.924	-34 12 53.48	0.10	4	70.924				5272
3444	-67	251	8.3	K2	3 42 07.446	0.26	4	69.594	-67 26 17.62	0.06	4	69.594				18773
3445	-21	682	8.0	K5	42 09.250	0.10	4	70.313	-21 15 46.07	0.22	4	70.313			767	5273
3446	-83	74	8.7	K2	42 12.664	0.09	4	70.148	-83 36 34.32	0.41	4	70.148				18774
3446	SP				42 12.458	0.23	4	70.363	-83 36 33.69	0.13	4	70.363				18774
3447	-63	253	8.93	G5	42 23.838	0.15	4	70.573	-63 36 20.14	0.17	4	70.573		4492		5274
3448	-13	729	8.5	G5	3 42 25.055	0.09	2	71.955	-13 37 25.59	0.03	2	71.955				5275
3449	-25	1530	8.5	K5	42 25.293	0.11	4	70.654	-25 19 24.64	0.07	4	70.654				5276
3450	-59	287	9.3	G0	42 28.911	0.10	5	71.785	-59 10 17.96	0.29	5	71.785				5277
3451	-43	1157	7.9	M0	42 31.644	0.12	4	70.281	-43 23 33.49	0.12	4	70.281				438
3452	-42	1226	7.30	K5	42 34.605	0.21	4	70.299	-42 03 13.85	0.17	4	70.299		4496		439
3453	-38	1268	9.2	K0	3 42 37.318	0.08	4	71.204	-37 46 58.71	0.19	4	71.204				5278
3454	+ 3	523	8.5	K5	42 39.533	0.14	2	71.928	+ 4 16 55.80	0.30	2	71.928				5279
3455	-19	737	8.5	G0	42 47.486	0.33	2	72.488	-19 17 24.83	1.31	2	72.488				5280
3456	-45	1249	9.2	G0	42 49.304	0.04	5	70.887	-44 55 43.60	0.19	5	70.887				440
3457	-16	696	8.4	F0	42 54.629	0.19	2	71.324	-16 33 58.23	0.21	2	71.324				5281
3458	+ 2	603	8.0	K2	3 42 57.714	--	1	71.872	+ 3 05 03.30	--	1	71.872				5282
3459	-31	1532	8.8	K0	42 58.559	0.09	4	70.474	-31 45 24.19	0.20	4	70.474				5283
3460	-28	1271	8.1	K2	42 59.624	0.12	4	70.486	-27 45 46.90	0.27	4	70.486				5284
3461	+ 5	539	5.36	B3	43 00.860	0.03	66	70.943	+ 5 53 41.12	0.04	65	70.945	1104	4505	769	81104
3462	-33	1354	9.0	K0	43 05.436	0.06	4	70.140	-33 36 26.74	0.20	4	70.140				5285
3463	-20	700	7.9	A5	3 43 07.303	0.17	4	70.642	-20 40 45.74	0.23	4	70.642				5286
3464	+ 0	651	8.5	F2	43 10.176	--	1	71.951	+ 0 27 44.68	--	1	71.951				5287
3465	-46	1156	7.9	F8	43 10.628	0.12	4	70.413	-46 04 56.59	0.13	4	70.413				441
3466	-15	649	7.56	K0	43 12.895	--	1	71.943	-15 31 41.99	--	1	71.943		4508		5288
3467	-10	739	8.7	F2	43 14.530	--	1	72.758	-10 26 39.97	--	1	72.758				5289

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3468	-17	723	8.5	F0	3 43 22.579	-	1	71.929	-17 17 54.82	-	1	71.929				5290
3469	-30	1477	8.9	K0	43 22.791	0.16	3	71.239	-29 48 25.41	0.49	3	71.239				5291
3470	-33	1356	8.4	G5	43 25.003	0.11	4	70.340	-32 47 33.54	0.14	4	70.340				5292
3471	-26	1423	6.92	A3	43 26.468	0.10	4	70.959	-26 04 14.63	0.09	4	70.959				5293
3472	-78	112	8.8	G5	43 28.455	0.14	4	70.399	-78 27 21.96	0.24	4	70.399				18775
3472	SP				3 43 28.521	0.12	4	70.309	-78 27 21.95	0.23	4	70.309				18775
3473	-54	591	9.2	K0	43 29.242	0.12	5	71.304	-54 19 19.71	0.16	5	71.304				5294
3474	-65	263		K0	43 34.959	0.03	56	70.967	-64 57 48.36	0.04	55	70.971	141	4517	773	30141
3475	-56	57		F5	43 40.300	0.33	5	71.304	-56 29 22.90	0.08	5	71.304				5295
3476	-30	14	8.42	K0	43 41.545	0.10	3	69.852	-30 14 43.95	0.15	3	69.852				5296
3477	-51	741	7.7	F5	3 43 48.253	0.14	4	69.377	-51 24 54.88	0.23	4	69.377				442
3478	-10	741	6.5	K0	43 49.281	0.03	2	71.301	-10 02 15.25	0.53	2	71.301				5297
3479	-38	1280	8.06	G5	44 01.862	0.09	4	69.879	-38 44 16.50	0.06	4	69.879				5298
3480	-72	260	8.5	F5	44 06.559	0.13	4	69.558	-72 45 54.65	0.21	4	69.558				18776
3481	+ 4	588	8.5	A0	44 11.396	0.09	2	71.528	+ 4 43 35.86	0.29	2	71.528				5299
3482	- 9	743	8.4	K0	3 44 12.140	0.04	2	71.317	- 9 35 47.52	0.24	2	71.317				5300
3483	-36	1433	8.7	K2	44 15.733	0.12	4	69.887	-36 17 23.52	0.10	4	69.887				5301
3484	- 9	745	9.41	G0	44 26.367	-	1	70.984	- 9 32 28.85	-	1	70.984				5302
3485	+23	541	2.96	BSp	44 30.462	0.15	11	71.660	+23 57 06.58	0.08	11	71.660	139	4541	776	30139
3486	-14	749	7.7	K0	44 36.848	0.27	2	71.932	-14 37 55.58	0.15	2	71.932			777	5303
3487	-25	1557	7.78	K5	3 44 36.981	0.01	4	70.123	-25 00 35.02	0.13	4	70.123				5304
3488	-66	213	9.4	K0	44 40.754	0.18	4	70.296	-65 47 14.66	0.11	4	70.296				18777
3489	-32	1462	8.2	K0	44 41.333	0.12	4	69.962	-32 21 55.84	0.12	4	69.962				5305
3490	-23	1565	4.33	F8	44 41.474	0.03	73	71.529	-23 23 58.06	0.04	72	71.538	140	4547	778	30140
3491	-11	736	8.3	G0	44 45.264	0.07	2	71.324	-11 38 35.66	0.14	2	71.324				5306
3492	-31	1541	8.2	G5	3 44 45.292	0.06	3	70.219	-31 00 27.27	0.20	2	69.958				5307
3493	-70	255	7.83	G0	45 01.375	0.25	4	69.417	-70 10 40.66	0.08	4	69.417				18778
3494	-42	1244	10.0	K0	45 09.149	0.08	4	70.019	-42 24 19.13	0.16	4	70.019				443
3495	-80	93	8.2	F8	45 10.020	0.16	4	69.133	-80 10 34.06	0.31	4	69.133				18779
3495	SP				45 10.043	0.07	4	70.819	-80 10 34.16	0.23	4	70.819				18779
3496	-17	730	7.6	K2	3 45 14.434	0.04	2	71.299	-17 40 37.31	0.04	2	71.299				5308
3497	-46	1171	9.2	F8	45 16.102	0.11	4	69.893	-45 59 21.52	0.29	4	69.893				444
3498	- 5	749	7.52	K0	45 18.561	0.09	3	70.773	- 5 59 23.64	0.08	3	70.773				5309
3499	- 7	681	8.5	A0	45 22.743	0.24	2	70.832	- 7 10 43.96	0.06	2	70.832				5310
3500	- 3	616	6.91	A2	45 28.013	-	1	70.954	- 3 00 51.68	-	1	70.954				5311
3501	-24	1877	5.04	A2	3 45 30.575	0.07	4	69.537	-24 01 41.42	0.18	4	69.537				5312
3502	-27	1394	8.3	K2	45 32.830	0.11	4	69.959	-27 20 15.84	0.09	4	69.959				5313
3503	-72	262	6.54	A0	45 38.434	0.13	6	69.409	-71 48 45.78	0.20	6	69.409	2269	4570		32269
3503	SP				45 38.388	0.08	41	71.377	-71 48 46.06	0.17	40	71.381	2269	4570		52269
3504	-37	1457	8.5	K0	45 42.810	0.18	4	70.116	-36 54 05.91	0.10	4	70.116				5314
3505	+ 9	494	6.95	G5	3 45 47.464	0.13	6	70.812	+ 9 29 36.01	0.05	6	70.812	2270	4574		32270
3506	- 1	536	8.72	K0	45 52.740	0.00	2	71.353	- 1 41 20.09	0.07	2	71.353				5315
3507	-51	914	6.60	K0	45 54.575	0.11	6	70.284	-50 54 23.98	0.09	6	70.284	2271	4578		32271
3508	-30	1497	5.61	G5	45 54.813	0.15	6	70.336	-30 19 07.45	0.08	6	70.336	2272	4579	784	32272
3509	-50	1149	7.80	K0	46 00.656	0.09	4	69.795	-50 13 04.35	0.29	3	69.455				445
3510	- 0	602	6.10	K0	3 46 04.940	0.12	6	71.355	+ 0 04 32.25	0.14	6	71.355	2273	4584	785	32273
3511	-13	743	8.1	K0	46 05.436	0.19	2	71.299	-13 27 32.24	0.28	2	71.299				5316
3512	- 4	670	7.3	G0	46 08.505	0.24	2	70.911	- 4 34 24.21	0.78	2	70.911				5317
3513	-22	682	8.5	K2	46 10.010	0.20	4	69.136	-22 20 44.82	0.09	4	69.136				5318
3514*	+23	557	3.80	B8	46 11.066	0.12	5	72.650	+23 54 06.56	0.10	5	72.650	142	4586	786	30142
3515	-40	1093	8.9	K0	3 46 15.981	0.06	4	69.976	-40 05 00.19	0.14	4	69.976				446
3516	-41	1147	10.2	F8	46 26.797	0.23	4	70.321	-41 19 49.20	0.17	4	70.321				447
3517	-67	255	8.8	G5	46 27.266	0.11	4	70.311	-66 57 58.91	0.22	4	70.311				18780
3518	-61	280	8.9	G5	46 37.185	0.17	4	69.844	-61 19 39.06	0.26	4	69.844				5319
3519	-69	210	8.8	K0	46 37.296	0.20	4	69.844	-69 35 56.54	0.20	4	69.844				18781
3520	-58	313	7.97	K2	3 46 38.600	0.15	4	70.071	-57 46 57.92	0.14	4	70.071				5320
3521	-28	1289	8.3	G5	46 41.241	0.17	4	69.116	-28 37 07.87	0.10	4	69.116				5321
3522	-49	1097	8.4	A5	46 45.705	0.10	3	70.507	-49 14 04.20	0.01	3	70.507				448
3523	-54	598	8.47	K0	46 46.003	0.12	4	70.144	-53 54 16.54	0.12	4	70.144				5322
3524*	- 1	539	6.76	G5	46 46.680	0.01	2	71.746	- 1 36 16.24	0.19	2	71.746				5323
3525	-45	1277	8.8	G5	3 46 56.882	0.16	4	70.627	-45 19 30.24	0.17	4	70.627				449
3526	- 0	605	8.5	B9	46 57.210	0.04	2	71.765	- 0 30 25.75	0.22	2	71.765				5324
3527	-36	1463	9.1	F5	47 11.606	0.13	4	70.833	-36 08 30.46	0.14	4	70.833				5325
3528	- 7	687	8.8	G5	47 24.544	0.07	2	71.754	- 7 40 27.27	0.22	2	71.754				5326
3529	-20	718	8.4	G5	47 32.774	0.08	4	69.051	-20 34 40.30	0.14	4	69.051				5327
3530	-36	1467	4.24	K0	3 47 34.806	0.04	42	70.933	-36 21 03.28	0.07	42	70.933	143	4624	790	30143
3531	-55	569	6.98	K0	47 37.519	0.13	4	70.028	-55 09 06.10	0.06	4	70.028				5328
3532	-58	316	8.7	K5	47 39.767	0.16	4	69.875	-58 09 22.86	0.07	4	69.875				5329
3533	-48	1090	9.0	G5	47 41.415	0.19	4	70.723	-48 26 29.54	0.12	4	70.723				450
3534	-47	1170	8.8	G0	47 47.334	0.13	4	70.688	-46 53 41.24	0.16	4	70.688				451
3535	-71	222	9.1	G0	3 47 47.538	0.08	4	70.113	-71 04 25.32	0.08	4	70.113				18782
3536	-38	1304	9.1	G5	47 49.611	0.10	4	70.995	-37 53 11.15	0.13	4	70.995				5330
3537	- 5	758	7.99	K0	47 51.582	0.17	2	72.409	- 5 13 35.07	0.39	2	72.409				5331
3538	-12	725	8.6	F0	47 53.037	0.07	2	71.347	-11 53 32.15	0.02	2	71.347				5332
3539	-17	738	7.8	K0	47 53.555	0.00	2	71.243	-16 55 33.18	0.19	2	71.243				5333

3514 A 2786, 3.9m-6.9m, 0.74.

3524 6.9m-9.4m, 0.78, 287°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
3540	-19	751	7.25	A0	47 59.337	0.18	2	71.924	-18 53 47.37	0.18	2	71.924		4632		5334
3541	-50	1166	9.2	K0	47 59.558	0.09	4	69.858	-50 33 51.07	0.11	4	69.858				452
3542	-74	276	3.17	M0	47 59.602	0.03	94	71.313	-74 23 30.96	0.04	93	71.317	146	4633	791	30146
3542	SP				47 59.617	0.08	33	71.254	-74 23 31.29	0.15	32	71.212	146	4633	791	50146
3543	-35	1425	8.6	K0	48 01.360	0.06	4	70.851	-35 33 56.13	0.07	4	70.851				5335
3544	-10	757	8.4	F5	48 01.982	--	1	71.842	-10 28 12.11	--	1	71.842				5336
3545	-43	1194	9.3	K0	48 02.442	0.09	4	71.093	-43 13 59.77	0.14	4	71.093				453
3546	+1	667	6.66	F0	48 06.758	0.19	2	71.364	+1 24 49.35	0.23	2	71.364		4636		5337
3547	-34	1427	8.9	G5	48 07.004	0.07	4	70.741	-34 10 38.94	0.09	4	70.741				5338
3548	-85	43	9.0	K5	48 10.194	0.19	4	69.972	-85 21 01.45	0.23	4	69.972				18783
3548	SP				48 10.197	0.21	4	70.293	-85 21 01.09	0.29	4	70.293				18783
3549	-24	1906	8.8	F8	48 11.917	0.16	4	68.836	-24 11 38.45	0.14	4	68.836				5339
3550	-33	1399	8.09	K0	48 13.806	0.11	3	70.523	-33 15 51.78	0.18	3	70.523		4638		5340
3551	+0	663	8.9	F8	48 14.388	0.06	2	71.995	+0 51 35.91	0.13	2	71.995				5341
3552	+25	627	8.6	F8	48 18.549	0.21	4	69.120	+26 12 15.07	0.26	4	69.120				25587
3553	-39	1211	8.0	K2	48 20.500	0.25	4	70.574	-39 46 07.39	0.19	4	70.574				5342
3554	-16	710	8.1	K2	48 27.034	0.01	2	71.329	-15 45 56.80	0.16	2	71.329				5343
3555	-26	1450	8.5	G5	48 30.069	0.17	3	69.506	-26 45 03.28	0.14	3	69.506				5344
3556	-84	44	7.80	F2	48 33.672	0.24	4	69.634	-84 14 17.68	0.28	4	69.634		4645		18784
3556	SP				48 33.634	0.43	4	69.361	-84 14 16.91	0.20	4	69.361		4645		18784
3557	+0	664	8.1	A2	48 35.714	0.06	2	71.298	+0 47 02.37	0.08	2	71.298				5345
3558	-10	759	8.6	G5	48 38.225	0.04	2	71.346	-9 53 14.00	0.13	2	71.346				5346
3559	-76	248	8.46	K0	48 57.461	0.20	4	70.191	-76 37 21.21	0.24	4	70.191		4655		18785
3559	SP				48 57.381	0.53	3	70.111	-76 37 20.84	0.40	4	70.656		4655		18785
3560	-29	1448	7.79	K2	48 57.564	0.08	4	69.303	-29 33 01.74	0.16	4	69.303			792	5347
3561	-19	756	8.6	A0	48 57.718	0.01	2	71.340	-19 03 36.38	0.07	2	71.340				5348
3562	+2	618	8.4	A2	49 08.699	0.25	2	71.357	+2 37 05.75	0.03	2	71.357				5349
3563	-51	930	8.7	G5	49 10.543	0.10	4	70.259	-51 10 28.34	0.08	4	70.259				454
3564	-52	458	8.7	K5	49 12.090	0.20	4	70.588	-51 59 39.00	0.18	4	70.588				5350
3565	-32	1492	7.4	K0	49 13.887	0.08	4	69.328	-31 48 11.86	0.17	4	69.328				5351
3566	+6	594	5.62	B9	49 20.081	0.08	7	70.053	+6 23 09.29	0.16	7	70.053	2275	4662	793	32275
3567	-45	1291	9.2	G5	49 20.368	0.23	4	70.129	-44 46 18.81	0.14	4	70.129				455
3568	-30	1526	8.4	K0	49 23.378	0.12	3	69.779	-30 13 31.02	0.16	3	69.779				5352
3569	-38	1322	9.2	F8	49 28.271	0.15	4	70.135	-38 21 33.51	0.09	4	70.135				5353
3570	-2	739	8.3	F0	49 28.907	0.36	2	70.816	-1 46 36.59	0.46	2	70.816				5354
3571	-60	271	7.92	M0	49 35.734	0.08	4	69.877	-60 34 38.63	0.25	4	69.877		4666		5355
3572	-3	625	8.5	F5	49 36.210	0.07	2	71.350	-3 33 55.71	0.06	2	71.350				5356
3573	-40	1109	7.8	M1	49 40.359	0.08	4	70.075	-40 14 04.81	0.05	4	70.075				456
3574	-1	549	6.94	A2	49 43.988	0.22	2	71.366	-0 48 15.03	0.42	2	71.366		4669		5357
3575	-23	1601	8.8	G0	49 48.413	0.25	4	69.078	-22 50 30.59	0.15	4	69.078				5358
3576	-56	586	9.2	--	49 54.180	0.31	4	70.823	-56 39 21.80	0.14	4	70.823				5359
3577	-48	1106	9.1	G5	50 01.562	0.10	4	69.898	-48 15 28.12	0.18	4	69.898				457
3578	-63	267	8.3	K0	50 02.045	0.19	4	70.354	-63 18 47.08	0.18	4	70.354				5360
3579	-70	265	8.4	K5	50 15.781	0.09	4	70.086	-70 05 44.88	0.10	4	70.086				18786
3580	-77	153	8.8	K0	50 18.238	0.17	4	69.877	-77 29 13.70	0.21	4	69.877				18787
3580	SP				50 18.168	0.25	4	69.760	-77 29 14.15	0.30	4	69.760				18787
3581	+16	523	5.96	F0	50 18.430	0.03	79	71.131	+17 10 46.22	0.04	78	71.147	1106	4677	796	81106
3582	-64	279	8.9	K0	50 19.697	0.12	4	70.427	-63 55 57.22	0.04	4	70.427				5361
3583	-56	587	7.58	K0	50 23.712	0.09	4	69.845	-56 26 33.77	0.25	4	69.845		4678		5362
3584	-37	1492	8.6	F5	50 31.810	0.08	4	70.558	-37 40 20.11	0.19	4	70.558				5363
3585	-7	695	6.55	B9	50 41.282	0.04	31	71.850	-6 46 53.03	0.05	32	71.880	1107	4683	798	31107
3586	+1	673	6.73	B9	50 54.414	0.08	2	72.456	+1 58 18.97	0.08	2	72.456		4686		5364
3587	-18	691	6.37	F2	50 58.158	0.06	7	70.888	-18 34 54.87	0.05	7	70.888	2276	4687	799	32276
3588	-8	744	8.2	K0	51 00.823	--	1	71.869	-8 09 45.01	--	1	71.869				5365
3589	-10	771	8.1	K0	51 00.986	0.16	2	72.467	-10 41 33.57	0.18	2	72.467				5366
3590	-45	1309	9.0	K0	51 02.116	0.12	4	70.595	-45 43 04.72	0.15	4	70.595				458
3591	-13	765	8.1	K0	51 25.752	0.09	2	71.836	-12 52 48.66	0.11	2	71.836				5367
3592	+0	672	9.0	G0	51 30.248	0.17	2	72.215	+0 51 11.58	0.06	2	72.215				5368
3593	-76	251	7.57	K2	51 31.160	0.04	4	70.007	-76 02 40.00	0.04	4	70.007		4697		18788
3593	SP				51 31.205	0.23	4	70.866	-76 02 39.97	0.74	4	70.866		4697		18788
3594	-34	1453	9.1	K2	51 37.207	0.15	4	70.986	-34 28 00.08	0.14	4	70.986				5369
3595	-32	1511	9.1	G5	51 37.612	0.07	4	69.298	-31 49 50.18	0.14	5	69.404				5370
3596	-0	616	8.8	F8	51 40.153	--	1	71.885	-0 17 10.59	--	1	71.885				5371
3597	-6	778	8.5	K0	51 40.494	--	1	70.989	-6 40 24.78	--	1	70.989				5372
3598	-41	1185	7.16	F8	51 43.244	0.19	4	70.592	-41 22 12.93	0.09	4	70.592		4700		459
3599	-35	1455	5.12	B5	51 44.574	0.05	6	70.854	-34 52 45.01	0.10	6	70.854	2278	4701	805	32278
3600*	+4	600	8.5	--	51 48.224	0.35	2	70.264	+5 03 18.15	0.10	2	70.264				25596
3601	-39	1231	8.1	G5	51 49.841	0.10	4	71.336	-39 40 42.27	0.13	4	71.336				5373
3602	-47	1187	5.77	K0	52 00.316	0.04	59	70.823	-47 02 24.67	0.06	58	70.825	1108	4711	807	31108
3603	-47	1189	9.01		52 00.680	0.29	3	70.786	-47 01 08.64	0.06	3	70.786		4712		460
3604	-6	779	8.2	F0	52 00.952	0.16	2	72.448	-5 59 51.91	0.38	2	72.448				5374
3605	+4	602	8.2	A0	52 03.135	0.00	2	72.018	+4 48 13.07	0.22	2	72.018				5375
3606	-4	689	8.10	G5	52 04.953	0.10	2	71.327	-4 18 14.53	0.18	2	71.327			808	5376
3607	-43	1221	7.7	K0	52 07.635	0.13	4	70.672	-43 18 32.66	0.04	4	70.672				461
3608	-9	773	7.06	F2	52 10.798	0.44	2	71.573	-9 39 59.16	0.01	2	71.573		4718		5377

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3609	-69	216	8.7	K2	3 52 13.031	0.17	4	70.009	-69 26 58.07	0.07	4	70.009				18789
3610	-28	1326	6.88	A2	52 13.390	0.07	3	69.821	-27 48 55.34	0.09	3	69.821		4719		5378
3611	-67	268	9.4	F8	52 16.039	0.19	4	70.328	-66 58 17.33	0.10	4	70.328				18790
3612*	-72	270	9.5	F8	52 17.141	0.17	5	70.241	-72 10 28.04	0.15	4	70.097				18791
3613*	-42	1291	9.3	G0	52 25.234	0.04	5	71.437	-42 01 08.64	0.23	5	71.437				462
3614	-17	754	8.6	K5	3 52 31.219	0.15	2	70.877	-17 36 53.34	0.23	2	70.877				5379
3615	-46	1223	8.7	K2	52 31.280	0.05	4	70.438	-46 25 09.83	0.14	4	70.438				463
3616	-20	736	8.8	F8	52 32.937	0.15	2	71.399	-19 57 26.37	0.24	2	71.399				5380
3617	-29	1477	8.5	K5	52 32.971	0.18	4	69.554	-29 08 34.99	0.07	4	69.554				5381
3618	-40	1128	5.61	*	52 37.931	0.05	6	70.428	-40 30 11.20	0.08	6	70.428	2280	4724		32280
3619	-15	687	7.40	M0	3 52 40.091	0.17	2	70.870	-15 03 05.46	0.08	2	70.870		4725		5382
3620	-57	591	8.6	K5	52 43.010	0.11	4	68.946	-57 13 51.98	0.14	4	68.946				5383
3621	-12	752	5.94	F0	52 54.830	0.14	2	70.532	-12 14 39.67	0.24	2	70.532		4729		5384
3622	-38	1345	8.7	G5	52 55.257	0.15	4	70.553	-38 11 05.17	0.12	4	70.553				5385
3623	-32	1522	9.0	A2	53 08.550	0.05	4	70.578	-32 14 39.00	0.09	4	70.578				5386
3624	-21	736	8.6	A3	3 53 10.848	0.09	4	69.094	-21 43 00.08	0.24	4	69.094				5387
3625	-35	1470	7.9	K2	53 14.687	0.10	4	70.432	-35 42 35.36	0.13	4	70.432				5388
3626	-53	628	6.42	A2	53 15.046	0.10	6	69.856	-52 50 08.39	0.17	6	69.856	2282	4735	811	32282
3627	-26	1477	8.1	K0	53 16.425	0.04	3	70.172	-26 41 23.46	0.22	3	70.172				5389
3628	+ 3	539	9.0	F8	53 18.894	0.11	2	71.388	+ 3 55 35.51	0.46	2	71.388				5390
3629	- 4	694	7.2	F5	3 53 20.201	0.21	2	71.347	- 4 40 16.57	0.10	2	71.347				5391
3630	-22	712	8.6	F0	53 27.819	0.08	4	70.057	-21 44 28.01	0.05	4	70.057				5392
3631	-26	1478	7.48	K2	53 29.783	0.12	4	69.829	-26 04 20.84	0.16	4	69.829		4737		5393
3632	-19	778	7.54	K0	53 32.769	0.24	3	71.855	-19 34 41.97	0.10	3	71.855		4739		5394
3633*	-51	945	8.7	G0	53 33.878	0.10	4	70.231	-50 52 40.00	0.17	4	70.231				464
3634	-33	1447	7.8	K2	3 53 37.890	0.09	4	69.683	-33 21 34.86	0.15	4	69.683				5395
3635	-54	607	8.5	G0	53 38.122	0.15	5	70.580	-54 35 34.41	0.13	5	70.580				5396
3636	+ 1	681	8.0	K0	53 42.901	0.22	2	70.832	+ 2 03 47.58	0.80	2	70.832				5397
3637	-58	326	9.1	G5	53 44.800	0.06	4	70.084	-57 52 12.05	0.07	4	70.084				5398
3638	-53	629	7.9	K2	53 45.048	0.16	4	69.638	-53 19 04.19	0.13	4	69.638				5399
3639	- 5	779	8.5	K5	3 53 48.307	0.13	2	71.334	- 5 17 51.08	0.19	2	71.334				5400
3640	-14	781	8.4	B9	53 49.970	0.20	2	71.320	-13 54 33.30	0.09	2	71.320				5401
3641	+22	605	5.76	F0	53 54.608	0.08	6	69.657	+22 20 05.67	0.12	6	69.657	2283	4744		32283
3642	-30	1559	8.8	K2	53 58.636	0.09	4	69.834	-29 57 18.58	0.18	3	69.531				5402
3643	+ 2	628	7.40	K0	54 00.940	0.34	2	71.319	+ 2 54 49.79	0.06	2	71.319		4745	813	5403
3644	-23	1642	8.6	F8	3 54 02.787	0.13	4	70.058	-23 34 10.33	0.09	4	70.058				5404
3645	-62	302	8.34	K0	54 03.925	0.12	5	70.023	-62 14 12.42	0.06	4	69.825		4746		5405
3646	-74	278	9.0	F5	54 08.279	0.14	4	69.871	-74 05 37.93	0.26	4	69.871				18792
3647	- 1	561	7.9	A2	54 10.931	0.01	2	71.325	- 1 42 56.51	0.07	2	71.325				5406
3648	-10	793	6.16	F0	54 13.994	0.09	6	70.022	- 9 53 41.49	0.15	6	70.022	2284	4751		32284
3649	- 1	562	8.6	F2	3 54 19.050	0.36	2	71.342	- 1 01 46.93	0.06	2	71.342				5407
3650	-75	253	8.1	K5	54 37.929	0.10	5	70.311	-75 27 20.10	0.09	5	70.311				18793
3650 SP					54 37.935	0.29	4	70.278	-75 27 20.04	0.17	4	70.278				18793
3651	- 3	645	8.9	K2	54 45.081	0.08	2	71.361	- 3 15 54.33	0.20	2	71.361				5408
3652	-18	705	8.4	K5	54 47.892	0.06	2	71.347	-18 41 50.04	0.32	2	71.347				5409
3653	-16	741	9.0	K0	3 54 53.510	0.32	2	71.360	-16 14 17.30	0.31	2	71.360				5410
3654	- 2	764	8.8	K0	55 03.846	0.15	2	71.288	- 2 07 04.75	0.08	2	71.288				5411
3655	-24	1981	7.0	A2	55 04.647	0.11	4	68.919	-24 46 29.36	0.11	4	68.919				5412
3656	-13	778	8.6	K0	55 11.157	0.19	2	71.375	-13 31 05.37	0.42	2	71.375				5413
3657	-60	276	8.36	K0	55 11.260	0.14	4	68.873	-60 44 12.36	0.11	4	68.873		4771		5414
3658	- 7	710	8.3	K2	3 55 11.678	0.61	3	71.772	- 7 08 44.36	0.17	3	71.772				5415
3659	-10	796	8.2	K0	55 14.393	0.07	2	70.900	- 9 50 34.16	0.14	2	70.900				5416
3660	-50	1209	8.06	G5	55 28.953	0.08	4	69.857	-49 54 06.02	0.18	4	69.857		4776		465
3661	-20	749	8.7	K0	55 31.177	0.05	4	69.081	-20 24 41.21	0.15	4	69.081				5417
3662	-44	1341	9.0	G0	55 35.029	0.09	5	70.059	-44 21 51.22	0.06	5	70.059				466
3663	-49	1157	9.6	K0	3 55 35.881	0.16	4	69.882	-49 11 17.94	0.16	4	69.882				467
3664	-39	1260	8.1	K0	55 37.004	0.20	4	70.130	-39 14 29.62	0.30	4	70.130				5418
3665	-58	330	8.4	K5	55 38.382	0.08	4	68.912	-58 37 51.75	0.05	4	68.912				5419
3666	-13	781	3.19	K5	55 41.769	0.02	115	71.743	-13 39 00.54	0.03	113	71.747	149	4778	816	30149
3667	+ 1	685	7.3	K5	55 46.149	0.21	2	71.317	+ 1 18 13.13	0.20	2	71.317				5420
3668	-62	306	9.3	K5	3 55 48.323	0.19	4	69.366	-61 51 05.47	0.09	4	69.366				5421
3669	-28	1353	8.5	K0	55 48.643	0.10	3	69.505	-28 00 53.53	0.07	3	69.505				5422
3670	-53	634	8.0	K0	55 54.371	0.27	4	68.864	-52 53 25.53	0.21	4	68.864				5423
3671	- 9	783	8.3	G5	55 58.135	0.16	2	71.301	- 9 08 26.22	0.24	2	71.301				5424
3672	-34	1472	9.0	K5	56 00.981	0.14	4	70.535	-34 39 11.55	0.21	4	70.535				5425
3673	-45	1347	8.8	G5	3 56 05.681	0.10	4	70.043	-44 52 51.33	0.09	4	70.043				468
3674	-80	102	9.2	G0	56 06.024	0.10	4	69.324	-79 57 16.55	0.14	4	69.324				18794
3674 SP					56 06.075	0.24	4	69.909	-79 57 16.47	0.26	4	69.909				18794
3675	-24	1996	8.8	K0	56 06.871	0.11	4	69.249	-24 04 54.69	0.07	4	69.249				5426
3676	- 3	650	7.1	G5	56 07.029	0.07	2	71.355	- 2 47 36.05	0.00	2	71.355				5427
3677	- 4	706	7.5	G5	3 56 10.199	0.06	2	71.510	- 3 48 25.62	0.02	2	71.510				5428
3678	+ 2	633	8.7	G5	56 10.530	0.08	2	71.928	+ 2 21 57.35	0.48	2	71.928				5429
3679	-54	611	8.6	F2	56 20.631	0.03	4	69.190	-54 29 59.19	0.08	4	69.190				5430
3680	+ 0	684	8.9	G5	56 21.498	0.07	2	71.788	+ 0 36 36.70	0.24	2	71.788				5431
3681	-11	770	8.3	F5	56 36.741	0.16	2	71.358	-11 34 34.74	0.02	2	71.358				5432

3612 9.8m-10.0m, 0°3, 89°.
 3613 9.3m-9.7m, 0°2, 137°.

3618 F5+A3.
 3633 10.6m, 2°4, 309°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
3682	-56	599	8.3	F0	3 56 37.884	0.12	4	69.272	-56 23 33.74	0.16	4	69.272				5433
3683	-32	1546	9.4	K0	56 40.815	0.09	4	70.580	-32 21 09.21	0.14	4	70.580				5434
3684	-35	1496	8.6	F2	56 42.601	0.03	4	70.400	-35 20 48.53	0.12	4	70.400				5435
3685	-37	1543	8.9	G5	56 42.602	0.13	4	70.573	-36 56 16.98	0.11	4	70.573				5436
3686	-33	1476	8.9	K2	56 44.294	0.11	4	70.335	-33 36 58.66	0.14	4	70.335				5437
3687	-48	1144	8.0	K0	3 56 46.094	0.16	5	70.902	-48 18 44.41	0.19	5	70.902				469
3688	-49	1165	7.10	K0	56 49.191	0.15	6	70.005	-49 45 07.70	0.18	6	70.005	2286	4789	819	32286
3689	-8	765	9.0	K	56 49.380	--	1	71.866	-7 46 54.73	--	1	71.866				5438
3690	+3	546	8.1	K2	56 50.056	0.03	2	71.349	+3 38 34.63	0.20	2	71.349				5439
3691	-0	626	8.4	F8	56 52.151	--	1	71.864	-0 32 54.45	--	1	71.864				5440
3692	+4	614	8.0	A2	3 56 54.820	0.19	2	71.383	+4 27 56.11	0.01	2	71.383				5441
3693	-27	1485	8.6	K2	57 01.939	0.15	3	69.532	-27 34 06.90	0.07	3	69.532				5442
3694	-15	696	8.1	F5	57 03.634	0.03	2	71.794	-15 16 49.14	0.35	2	71.794				5443
3695	-38	1378	9.0	K0	57 09.987	0.09	4	70.349	-38 26 17.21	0.15	4	70.349				5444
3696	-0	627	9.0	A5	57 14.386	--	1	71.872	-0 09 38.74	--	1	71.872				5445
3697*	-29	1517	8.6	F5	3 57 24.986	0.14	4	69.360	-28 54 53.90	0.10	4	69.360				5446
3698	+0	687	8.3	K5	57 27.044	0.20	2	72.398	+1 15 39.22	0.04	2	72.398				5447
3699*	+7	582	10.0	K0	57 27.403	0.09	3	69.861	+8 09 53.08	0.55	3	69.861				25616
3700	-51	966	8.0	G5	57 31.612	0.11	4	70.555	-51 13 54.50	0.13	4	70.555				470
3701	-57	606	6.14	F2	57 38.350	0.08	18	70.838	-57 14 37.00	0.06	17	70.840	1109	4794	822	31109
3702	-19	796	7.09	F8	3 57 46.699	0.06	2	71.543	-19 23 12.80	0.23	2	71.543		4800		5448
3703	-12	768	8.2	K0	57 46.738	0.04	2	71.551	-12 33 47.60	0.03	2	71.551				5449
3704	-24	2022	4.69	A0p	57 47.502	0.14	6	70.619	-24 09 24.40	0.07	6	70.619	2287	4801		32287
3705	-47	1226	9.2	G5	57 49.138	0.13	4	70.301	-46 53 49.91	0.20	4	70.301				471
3706	-6	799	8.4	M1	57 51.326	0.25	2	70.574	-6 31 28.45	0.15	2	70.574				5450
3707	-61	289	8.51	K0	3 57 52.126	0.14	4	69.895	-61 26 35.72	0.09	4	69.895		4803		5451
3708	+12	539	3.8v	B3	57 54.370	0.06	14	72.226	+12 21 01.88	0.05	13	72.327	150	4805	823	30150
3709	+17	666	5.76	F0	57 55.851	0.08	6	71.376	+18 03 15.56	0.19	6	71.376	2288	4807		32288
3710	-61	290	4.41	M0	57 56.971	0.05	30	70.989	-61 32 27.90	0.07	29	70.951	1110	4808	824	31110
3711	-43	1258	9.0	K0	58 02.431	0.10	5	70.058	-43 19 57.31	0.15	5	70.058				472
3712	-23	1684	8.5	G5	3 58 08.703	0.13	4	70.281	-23 18 38.50	0.14	4	70.281				5452
3713	-64	291	9.0	K5	58 09.729	0.09	5	70.918	-63 58 32.93	0.10	5	70.918				18795
3714	-36	1554	8.9	K0	58 10.227	0.08	4	70.169	-35 46 41.68	0.15	4	70.169				5453
3715	-31	1637	8.6	M0	58 20.593	0.20	4	69.582	-31 35 06.32	0.12	4	69.582				5454
3716	-42	1333	7.31	K0	58 20.877	0.26	4	70.413	-42 31 48.80	0.32	4	70.413		4815		473
3717	-68	241	8.04	K0	3 58 27.375	0.16	4	69.886	-68 29 04.47	0.16	4	69.886		4817		18796
3718	-66	240	7.80	M0	58 27.828	0.23	4	70.575	-66 01 19.35	0.10	4	70.575		4818		18797
3719	-5	795	8.8	G5	58 30.622	0.06	2	71.783	-4 51 17.80	0.37	2	71.783				5455
3720	-30	1597	5.85	A0	58 40.936	0.08	6	71.152	-30 37 49.05	0.12	6	71.152	2289	4824		32289
3721	-50	1227	9.3	K5	58 42.907	0.16	4	70.906	-50 20 46.12	0.13	4	70.906				474
3722	-6	802	8.7	K2	3 58 44.746	0.25	2	71.810	-6 22 25.35	0.12	2	71.810				5456
3723	-17	776	7.9	K0	58 46.098	0.04	2	71.334	-17 30 15.45	0.06	2	71.334				5457
3724	-44	1365	9.07	G0	58 51.173	0.15	4	70.545	-44 37 57.95	0.14	4	70.545		4825		475
3725	-1	572	5.25	B5	58 59.891	0.02	107	70.929	-1 41 18.55	0.03	106	70.930	1111	4828	826	81111
3726	-36	1563	9.2	G5	59 02.335	0.12	4	69.903	-36 19 02.64	0.09	4	69.903				5458
3727	-52	485	8.5	K0	3 59 20.583	0.13	4	70.420	-52 18 32.28	0.10	4	70.420				5459
3728	-73	247	8.11	K0	59 21.649	0.06	4	70.209	-73 31 20.39	0.09	4	70.209		4835		18798
3729	-41	1248	10.2	F5	59 37.913	0.18	4	70.558	-41 23 20.69	0.09	4	70.558				476
3730	-29	1532	8.6	K0	59 38.320	0.09	4	69.325	-29 19 00.80	0.07	4	69.325				5460
3731	-21	764	7.52	K2	59 44.055	0.06	3	69.901	-21 09 32.62	0.19	3	69.901		4840		5461
3732	-46	1268	7.24	G5	3 59 44.321	0.11	4	69.857	-46 16 34.16	0.08	4	69.857		4841		477
3733	-2	777	7.9	F5	59 45.041	0.22	2	71.384	-1 46 14.38	0.03	2	71.384		4842	829	5462
3734	-4	723	8.3	K2	59 47.094	0.09	2	71.506	-4 26 26.93	0.35	2	71.506				5463
3735	-31	1652	9.2	K2	59 51.597	0.03	4	69.414	-30 55 10.87	0.07	4	69.414				5464
3736	-66	244	8.1	G5	4 00 00.050	0.24	5	70.001	-66 19 03.99	0.26	4	69.798				18799
3737	-19	801	8.8	K2	4 00 27.724	0.34	2	70.564	-19 11 01.12	0.01	2	70.564				5465
3738	+5	581	3.94	A0	00 29.599	0.03	44	71.480	+5 51 07.51	0.05	44	71.480	151	4862	831	30151
3739	-9	801	8.8	F0	00 38.195	0.16	2	71.357	-8 53 25.20	0.03	2	71.357				5466
3740	-27	1517	7.39	G0	00 39.101	0.25	4	69.320	-27 37 18.04	0.11	4	69.320		4866		5467
3741	+2	641	7.35	K2	00 44.301	0.16	2	71.314	+3 03 02.59	0.04	2	71.314		4871		5468
3742	-2	782	8.2	G5	4 00 47.103	0.06	2	71.380	-2 29 58.24	0.24	2	71.380				5469
3743	-53	647	8.8	K0	00 56.275	0.06	4	69.375	-53 45 25.65	0.19	4	69.375				5470
3744	-71	234	6.72	A0	01 00.522	0.03	87	71.090	-71 18 19.47	0.03	87	71.090	1114	4875	832	31114
3744 SP					01 00.478	0.07	62	71.535	-71 18 19.68	0.13	62	71.541	1114	4875	832	51114
3745	-10	823	8.3	K2	01 01.248	0.12	2	71.350	-10 41 27.17	0.08	2	71.350				5471
3746	-40	1195	8.6	K0	4 01 02.569	0.16	4	69.680	-40 07 58.88	0.15	4	69.680				478
3747	-49	1192	9.0	K0	01 17.903	0.15	4	69.692	-48 57 59.61	0.21	4	69.692				479
3748	-64	296	8.5	G5	01 19.997	0.16	5	69.075	-64 42 30.90	0.11	4	69.377				18800
3749	-24	2062	7.70	M3	01 21.730	0.01	3	70.411	-24 35 47.47	0.17	3	70.411		4885		5472
3750	+3	554	8.4	B9	01 24.446	--	1	71.659	+3 42 15.60	--	1	71.659				5474
3751	-20	770	7.39	K2	4 01 24.465	0.08	4	70.058	-20 17 42.39	0.04	3	69.831		4888		5473
3752	-55	594	8.5	K5	01 25.423	0.12	4	69.842	-54 53 07.96	0.17	4	69.842				5475
3753	-26	1535	6.83	K5	01 28.443	0.12	4	70.062	-25 59 04.07	0.17	4	70.062		4889		5476
3754	-48	1174	7.06	K0	01 31.663	0.07	4	69.705	-48 30 20.87	0.19	4	69.705				480
3755	+2	645	5.39	F5	01 33.019	0.12	5	70.074	+2 41 30.26	0.06	5	70.074	2292	4892		32292

3697 SDS, 9.2m-9.4m, 0°3, 203°.

3699 A 2923BC, 9.6m-9.7m, 0°3, BC-A, 4°7, 196°.

3708 3.8m to 4.1m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Deci 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3756	-25	1702	8.5	K5	4 01 33.127	0.07	4	70.065	-25 00 43.62	0.05	4	70.065				5477
3757	-5	810	7.57	K5	01 33.221	0.05	2	71.319	-4 44 12.38	0.18	2	71.319		4893		5478
3758	-1	577	8.2	F5	01 37.153	0.01	2	71.308	-1 18 40.45	0.22	2	71.308				5479
3759	-39	1306	8.8	M0	01 40.560	0.12	4	70.062	-39 30 54.01	0.11	4	70.062				5480
3760	+21	585	4.50	K0	01 44.211	0.06	18	72.023	+21 56 47.74	0.12	18	72.023	1112	4897	836	31112
3761	-31	1667	9.1	K5	4 01 48.098	0.06	5	71.089	-31 28 42.63	0.27	5	71.089				5481
3762	-44	1386	8.0	K0	01 52.046	0.02	4	69.892	-44 16 27.43	0.10	4	69.892				481
3763	-16	770	6.49	K2	01 52.207	0.11	4	71.360	-16 43 27.27	0.08	4	71.360	2293	4901		5482
3764	-14	810	8.2	K2	01 55.572	0.22	2	71.422	-13 58 52.50	0.25	2	71.422				5483
3765	-59	304	8.72	K5	01 58.708	0.16	4	69.564	-59 40 14.68	0.08	4	69.564		4904		5484
3766	-3	676	8.0	F0	4 02 01.881	0.22	2	71.373	-3 28 31.02	0.18	2	71.373				5485
3767	-6	811	8.1	A0	02 02.438	0.14	2	71.407	-6 18 31.35	0.30	2	71.407				5486
3768	-38	1417	8.9	G5	02 21.232	0.13	4	70.146	-38 15 41.32	0.02	4	70.146				5487
3769	-29	1555	9.32	F2	02 24.351	0.20	4	70.313	-29 39 02.97	0.10	4	70.313		4918		5488
3770	-35	1539	8.6	K2	02 34.248	0.06	5	70.048	-34 52 15.20	0.13	5	70.048				5489
3771	-69	234	7.52	K2	4 02 34.745	0.24	4	69.098	-69 05 01.56	0.10	4	69.098		4921		18801
3772	-12	789	7.7	A0	02 34.751	0.10	2	71.332	-11 56 02.54	0.21	2	71.332				5490
3773	-5	816	8.0	F5	02 36.144	0.14	2	70.492	-4 55 11.96	0.02	2	70.492				5491
3774	-23	1729	8.4	K0	02 40.009	0.06	4	70.317	-22 51 48.68	0.09	4	70.317				5492
3775	-1	581	7.5	G5	02 41.684	0.31	2	70.510	-1 08 47.63	0.12	2	70.510				5493
3776	-28	1392	8.3	F2	4 02 43.049	0.08	4	70.927	-28 29 01.79	0.15	4	70.927				5494
3777	-7	737	8.6	K0	02 43.720	0.06	2	71.321	-7 34 25.03	0.17	2	71.321				5495
3778	-21	777	8.0	K2	02 59.478	0.19	3	71.551	-21 35 15.59	0.05	3	71.551				5496
3779	-30	1638	8.36	K2	03 00.350	0.15	4	70.997	-30 18 52.03	0.20	3	70.303		4927		5497
3780	-46	1283	8.0	G5	03 02.131	0.21	4	69.745	-46 02 14.87	0.15	4	69.745				482
3781	-16	775	8.8	F0	4 03 07.938	0.02	2	71.523	-15 50 38.90	0.34	2	71.523				5498
3782	-36	1588	8.4	K2	03 13.480	0.08	4	70.134	-36 31 29.49	0.20	4	70.134				5499
3783	-63	292	8.7	K2	03 20.874	0.03	4	69.387	-62 55 17.05	0.09	4	69.387				5500
3784	-56	624	8.8	K2	03 20.916	0.16	4	69.627	-55 55 56.46	0.11	4	69.627				5501
3785	-12	793	8.7	A5	03 21.400	0.08	2	71.510	-11 45 42.52	0.40	2	71.510				5502
3786	+4	632	8.6	F5	4 03 22.116	0.28	2	71.541	+4 33 36.50	0.51	2	71.541				5503
3787	-42	1366	9.5	G0	03 22.323	0.14	4	70.377	-42 02 45.48	0.24	4	70.377				483
3788	-56	625	8.6	K0	03 24.381	0.26	4	69.408	-56 17 05.10	0.17	4	69.408				5504
3789	+0	696	8.8	A0	03 28.798	0.01	2	71.566	+0 40 44.04	0.43	2	71.566				5505
3790	-33	1547	8.8	K5	03 29.176	0.07	4	70.530	-32 56 38.59	0.12	4	70.530				5506
3791	-33	1548	9.1	K0	4 03 29.620	0.09	4	70.401	-33 42 37.22	0.12	4	70.401				5507
3792	-9	811	6.26	A2	03 31.912	0.09	5	71.772	-8 59 24.94	0.26	5	71.772	2294	4936		5508
3793	-27	1540	5.57	A5	03 33.998	0.02	104	70.912	-27 47 13.02	0.03	102	70.901	153	4938	840	30153
3794	-0	642	8.7	G5	03 35.397	0.26	3	71.994	-0 09 18.53	0.46	3	71.994				5509
3795	-15	717	8.4	K2	03 41.998	0.12	2	71.355	-14 51 39.64	0.26	2	71.355				5510
3796	-47	1261	8.5	K2	4 03 45.081	0.08	4	70.056	-47 21 24.50	0.07	4	70.056				484
3797	-35	1551	7.9	K0	03 47.698	0.02	4	69.870	-35 36 04.12	0.55	4	69.870				5511
3798	+28	619	5.29	F0	03 54.513	0.11	6	69.848	+28 52 04.10	0.28	6	69.848	2295	4944	842	32295
3799	-35	1552	8.0	K0	04 02.041	0.06	4	70.383	-35 12 13.56	0.13	4	70.383				5512
3800	-23	1739	8.7	G5	04 02.931	0.09	4	69.935	-23 24 49.60	0.14	4	69.935				5513
3801	-19	820	7.63	K5	4 04 03.338	0.03	2	71.287	-19 38 48.72	0.28	2	71.287				5514
3802	+1	699	8.0	F5	04 06.057	0.02	2	71.368	+1 33 04.25	0.17	2	71.368		4948		5515
3803	-2	807	8.5	K0	04 09.968	0.25	2	71.396	-2 02 52.67	0.02	2	71.396				5516
3804	-13	812	8.5	F8	04 12.714	0.09	2	71.385	-13 20 39.45	0.02	2	71.385				5517
3805	-37	1603	9.0	G5	04 15.092	0.09	4	70.581	-37 37 54.74	0.17	4	70.581				5518
3806	-75	259	9.1	G0	4 04 17.848	0.09	5	69.451	-75 17 43.32	0.13	5	69.451				18802
3806 SP					04 17.669	0.65	4	70.617	-75 17 43.34	0.47	4	70.617				18802
3807	-71	238	8.8	M5	04 21.966	0.15	4	68.601	-71 32 04.00	0.19	4	68.601				18803
3808	-18	752	6.75	K5	04 22.343	0.04	2	71.385	-18 11 02.68	0.01	2	71.385		4951		5519
3809	-41	1282	9.0	G5	04 43.342	0.19	4	70.600	-41 27 17.63	0.16	4	70.600				485
3810	-49	1215	9.0	G5	4 04 44.357	0.10	4	70.159	-49 02 14.06	0.07	4	70.159				486
3811*	-22	754	6.58	A3	04 48.155	0.12	3	69.231	-22 07 37.36	0.22	3	69.231		4961	847	5520
3812	-10	841	7.02	K0	04 52.166	0.11	3	71.227	-9 53 26.05	0.18	3	71.227		4965		5521
3813	-6	822	6.87	A2	05 01.800	0.10	2	70.566	-6 08 24.55	0.15	2	70.566		4968		5522
3814	-35	1561	9.0	K0	05 02.590	0.13	4	70.633	-35 39 38.70	0.14	4	70.633				5523
3815	-64	302	8.8	K0	4 05 05.524	0.13	4	68.627	-64 03 42.34	0.23	4	68.627				5524
3816	-43	1302	9.5	F8	05 08.267	0.08	5	70.765	-43 29 16.60	0.14	5	70.765				487
3817	-55	602	8.9	K0	05 08.626	0.19	5	70.555	-55 22 38.84	0.27	5	70.555				5525
3818	-1	588	9.0	K0	05 09.726	0.09	2	71.395	-1 45 14.53	0.36	2	71.395				5526
3819	+2	649	8.8	K5	05 10.269	0.11	2	71.358	+2 35 36.79	0.20	2	71.358				5527
3820	-15	720	8.4	K0	4 05 12.716	0.14	2	71.514	-15 34 21.72	0.37	2	71.514				5528
3821	+3	563	8.4	F5	05 15.441	0.25	2	71.264	+4 09 54.53	0.00	2	71.264				5529
3822	-60	289	8.16	G5	05 18.289	0.10	5	70.221	-60 00 32.53	0.30	4	70.073		4976		5530
3823	-26	1564	8.4	F5	05 18.902	0.10	4	69.763	-26 25 57.48	0.23	3	69.437				5531
3824	-57	621	9.0	K2	05 19.581	0.12	4	69.668	-57 40 03.38	0.10	4	69.668				5532
3825	-53	652	8.4	K0	4 05 23.873	0.11	4	70.185	-53 06 41.71	0.18	4	70.185				5533
3826	-4	742	8.3	K2	05 28.579	0.19	2	71.234	-4 18 57.23	0.33	2	71.234				5534
3827	-45	1406	8.0	G0	05 31.177	0.26	5	70.650	-45 04 41.83	0.13	5	70.650				488
3828	-23	1758	9.0	A0	05 38.585	0.04	4	70.000	-23 14 13.43	0.07	4	70.000				5536
3829	-39	1336	8.5	M0	05 38.602	0.01	4	70.112	-39 37 51.55	0.07	4	70.112				5535

3811 A 3000, 7.1m-7.5m, 0°4, 116°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
3830	-35	1571	7.64	G0	4 05 40.392	0.10	6	69.860	-35 31 26.67	0.07	6	69.860				21003
3831	-78	126	8.8	F5	05 40.741	0.18	4	69.572	-78 02 59.95	0.03	4	69.572				18804
3831	SP				05 40.683	0.06	5	71.080	-78 03 00.22	0.48	4	71.039				18804
3832	-27	1564	8.1	K2	05 48.758	0.06	4	69.773	-27 41 46.87	0.11	4	69.773				5537
3833	+ 0	701	8.2	F2	06 07.410	0.14	2	70.838	+ 0 39 08.16	0.03	2	70.838				5538
3834	-70	276	7.67	A5	4 06 10.019	0.15	4	70.282	-70 00 15.66	0.07	4	70.282		4993		18805
3835	-68	244	7.9	G5	06 11.096	0.16	4	69.594	-67 50 16.75	0.10	4	69.594				18806
3836	-36	1604	9.1	K0	06 11.796	0.12	4	69.948	-36 45 38.16	0.19	4	69.948				5539
3837	+13	648	6.02	B9	06 13.826	0.07	6	69.865	+13 16 02.25	0.12	6	69.865	2298	4994		32298
3838	+19	672	5.67	G5	06 15.093	0.04	36	71.547	+19 28 42.47	0.06	34	71.527	1115	4995	851	31115
3839	-33	1570	9.4	F0	4 06 21.211	0.15	4	70.160	-33 23 23.06	0.12	4	70.160				5540
3840	- 9	823	7.4	B9	06 21.918	0.13	2	70.855	- 8 48 04.90	0.24	2	70.855				5541
3841	-73	249	8.8	A3	06 26.714	0.16	4	71.074	-73 24 49.82	0.19	4	71.074				18807
3842	-31	1711	9.6	K0	06 29.432	0.20	4	69.138	-31 05 53.90	0.25	4	69.138				5542
3843	-60	294	9.2	M0	06 29.954	0.13	4	70.272	-60 34 45.40	0.07	4	70.272				5543
3844	-50	1278	7.5	K5	4 06 35.113	0.21	4	69.943	-50 18 25.43	0.28	4	69.943				489
3845	-19	831	8.5	K2	06 42.221	0.05	2	71.312	-19 15 46.12	0.09	2	71.312				5544
3846	-40	1235	8.2	K0	06 43.818	0.20	4	70.166	-40 13 52.11	0.21	4	70.166				490
3847	-34	1532	8.0	K0	06 43.903	0.08	5	70.426	-34 15 01.63	0.09	5	70.426				5545
3848	-48	1204	8.0	G5	06 44.177	0.11	4	70.086	-48 28 37.16	0.10	4	70.086				491
3849	-17	801	8.3	F2	4 06 46.358	0.01	2	71.347	-17 44 38.16	0.08	2	71.347				5546
3850	-13	820	8.8	K5	06 47.210	0.01	2	71.346	-13 25 07.19	0.16	2	71.346				5547
3851	-25	1748	8.02	K2	06 54.058	0.17	4	68.891	-25 08 54.90	0.07	4	68.891		5002		5548
3852*	- 8	798	7.28	A2	06 55.046	0.16	2	71.405	- 8 03 34.14	0.05	2	71.405		5003		5549
3853	-58	346	7.84	K2	06 55.551	0.15	4	70.336	-58 39 30.87	0.16	4	70.336		5004		5550
3854	-21	797	8.7	K0	4 06 58.437	0.10	4	68.676	-20 50 05.48	0.05	4	68.676		5006		5551
3855	-46	1314	6.38	F0	07 00.822	0.08	6	69.610	-45 59 45.66	0.12	6	69.610	2299	5008	854	32299
3856	-16	796	5.45	B3	07 01.505	0.02	2	71.347	-16 30 59.23	0.18	2	71.347		5009	855	5552
3857	-51	1019	9.3	G5	07 03.106	0.12	4	70.618	-51 28 48.26	0.16	4	70.618				492
3858	+ 2	655	6.51	F2	07 05.996	0.20	3	70.952	+ 2 11 34.41	0.14	3	70.952		5010	856	5553
3859	-66	257	7.9	G5	4 07 10.076	0.20	4	70.205	-66 34 36.08	0.16	4	70.205				18808
3860	-17	806	8.4	F0	07 18.981	0.18	2	70.947	-17 37 57.84	0.10	2	70.947				5554
3861	- 3	696	6.80	A0	07 19.155	0.32	2	70.530	- 3 42 13.15	0.10	2	70.530		5013	858	5555
3862	-12	810	7.5	A0	07 24.533	0.07	2	71.323	-12 41 27.26	0.13	2	71.323				5556
3863	-81	102	8.4	K5	07 27.890	0.15	4	69.421	-81 01 25.79	0.25	4	69.421				18809
3863	SP				4 07 27.923	0.48	4	69.432	-81 01 25.61	0.29	4	69.432				18809
3864	-54	629	8.9	F8	07 29.314	0.09	4	70.547	-54 46 08.16	0.13	4	70.547				5557
3865	-10	854	8.7	K2	07 30.239	0.11	2	71.765	- 9 48 55.37	0.15	2	71.765				5558
3866	-39	1349	9.2	G0	07 37.168	0.12	4	69.717	-38 49 00.61	0.19	4	69.717				5559
3867	-56	634	8.8	K0	07 40.955	0.13	5	70.207	-56 41 04.56	0.31	4	70.056				5560
3868	+ 0	707	8.3	K0	4 07 42.827	0.10	2	71.403	+ 0 13 00.71	0.08	2	71.403				5561
3869	- 6	838	8.6	F8	07 43.709	0.13	2	71.388	- 6 11 15.90	0.09	2	71.388				5562
3870	+26	686	5.55	F0	07 46.792	0.03	100	71.068	+26 21 07.07	0.04	98	71.059	1116	5020	859	81116
3871	-65	305	7.97	K0	07 47.192	0.13	5	71.007	-65 42 28.07	0.10	5	71.007		5021		18810
3872	-37	1633	9.1	G5	08 00.556	0.11	4	69.847	-37 28 58.10	0.13	4	69.847				5563
3873	-33	1583	8.5	K2	4 08 05.561	0.07	4	70.298	-33 16 58.28	0.08	4	70.298				5564
3874*	- 5	841	7.50	G0	08 15.777	0.21	2	71.331	- 5 00 10.03	0.17	2	71.331		5033		5565
3875	-11	821	7.8	K2	08 22.355	0.18	2	71.336	-11 27 37.48	0.22	2	71.336				5566
3876	-42	1393	8.85	G5	08 22.757	0.10	4	69.718	-42 03 14.08	0.15	4	69.718		5034		493
3877	-26	1582	8.0	G5	08 25.026	0.01	4	68.877	-26 10 51.64	0.04	4	68.877				5567
3878	-30	1687	8.9	A2	4 08 25.864	0.39	3	69.148	-30 24 40.71	0.23	3	69.148				5568
3879	-69	242	8.94	F0	08 28.723	0.04	4	69.122	-68 49 57.15	0.09	4	69.122		5037		18811
3880	+ 1	713	8.0	M0	08 33.279	0.45	2	71.350	+ 2 11 23.16	0.11	2	71.350		5038		5569
3881	-42	1396	8.0	G5	08 33.508	0.07	4	69.724	-42 45 06.14	0.12	4	69.724				494
3882	-14	832	7.6	K5	08 39.054	0.06	3	70.777	-14 29 30.10	0.31	3	70.777				5570
3883	+ 5	601	5.71	F0	4 08 40.581	0.07	6	69.447	+ 5 23 40.03	0.12	6	69.447	2301	5042	861	32301
3884	-29	1606	8.2	G0	08 52.785	0.11	4	69.572	-29 10 58.19	0.12	4	69.572				5571
3885	-61	305	9.27	K5	08 52.920	0.12	4	69.066	-61 33 09.05	0.11	4	69.066		5045		5572
3886	-35	1588	6.35	G5	08 54.183	0.14	4	69.676	-35 24 08.50	0.08	4	69.676		5046		5573
3887	- 3	704	8.5	K2	08 57.700	0.19	2	71.342	- 3 23 02.76	0.41	2	71.342				5574
3888	- 0	653	6.75	K0	4 08 58.385	0.04	2	71.328	- 0 33 02.70	0.04	2	71.328		5049		5575
3889	-20	801	5.80	A0	09 24.457	0.10	6	69.667	-20 29 04.38	0.18	6	69.667	2302	5055		32302
3890	- 7	764	4.14	F2	09 25.358	0.02	93	71.783	- 7 57 57.87	0.03	91	71.777	154	5056	864	30154
3891	-21	807	8.8	A3	09 33.284	0.21	4	68.896	-21 32 40.24	0.06	4	68.896				5576
3892	- 8	807	8.9	A0	09 33.797	0.06	2	71.495	- 8 17 00.02	0.32	2	71.495				5577
3893	- 6	841	8.7v	F2	4 09 45.259	0.21	4	69.848	- 6 08 56.63	0.08	4	69.848				25651
3894	- 5	848	9.0	K0	09 46.645	0.03	2	70.567	- 5 42 14.35	0.01	2	70.567				5578
3895	- 4	763	6.94	K5	09 51.305	0.04	2	70.880	- 4 32 15.56	0.15	2	70.880		5065		5579
3896	- 2	832	7.6	K0	10 01.875	0.08	2	71.316	- 2 38 25.05	0.21	2	71.316		5069		5580
3897	+ 4	652	7.9	G5	10 04.561	0.13	2	71.284	+ 4 54 13.60	0.13	2	71.284				5581
3898	-35	1602	8.4	K2	4 10 17.954	0.16	4	69.696	-35 05 01.90	0.09	4	69.696				5582
3899	-76	264	9.0	M0	10 19.386	0.04	5	69.260	-76 44 12.89	0.19	5	69.260				18812
3899	SP				10 19.219	0.37	4	70.441	-76 44 11.76	0.16	4	70.441				18812
3900	-52	502	8.4	K0	10 22.418	0.15	4	68.885	-52 14 20.24	0.14	4	68.885				5583
3901	-47	1300	8.5	K0	10 30.336	0.11	4	70.051	-47 26 53.44	0.13	4	70.051				495

3852 A 3032, 8.1m-8.1m, 0".2.
 3874 A 3041, 8.3m-8.3m, 0".1.

3893 8.7m to 9.7m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3902	-57	628	9.1	K0	4 10 31.974	0.05	4	69.200	-57 04 29.25	0.12	4	69.200				5584
3903	-19	850	8.6	K0	10 32.202	0.27	2	71.313	-18 46 23.84	0.09	2	71.313				5585
3904	-4	770	7.8	G5	10 33.305	0.05	2	71.369	-4 26 19.28	0.05	2	71.369				5586
3905	-11	829	8.6	K	10 34.345	0.18	2	71.451	-11 14 59.12	0.07	2	71.451				5587
3906	-49	1248	8.5	G5	10 41.691	0.05	4	70.547	-49 06 13.78	0.10	4	70.547				496
3907	-21	812	8.6	K0	4 10 41.732	0.26	4	68.636	-21 29 44.81	0.16	4	68.636				5588
3908	-53	664	6.91	K0	10 45.442	0.09	6	69.807	-53 32 21.07	0.14	6	69.807	2303	5084		32303
3909	+3	572	8.2	K5	10 46.691	0.19	2	71.334	+3 46 33.01	0.58	2	71.334				5589
3910	-33	1613	9.0	K0	10 58.154	0.12	5	70.417	-33 16 01.33	0.11	5	70.417				5590
3911	-77	161	8.9	A2	10 58.921	0.10	4	69.897	-77 10 44.67	0.07	4	69.897				18813
3911	SP				4 10 58.909	0.14	4	70.517	-77 10 44.44	0.48	4	70.517				18813
3912	-12	823	7.8	K5	11 02.372	0.06	2	71.339	-12 25 18.36	0.22	2	71.339				5591
3913	-44	1451	8.35	K0	11 03.179	0.10	4	70.391	-44 00 04.07	0.14	4	70.391		5096		497
3914	-45	1444	8.0	K2	11 05.522	0.17	4	70.174	-45 29 39.30	0.02	4	70.174				498
3915	-1	600	6.34	B5	11 05.672	0.11	6	70.378	-1 16 32.63	0.09	6	70.378	2305	5097		32305
3916	-25	1783	8.6	K0	4 11 06.427	0.16	4	68.862	-25 25 10.26	0.11	4	68.862				5592
3917	-60	298	8.9	K2	11 11.225	0.06	4	68.873	-60 47 30.97	0.12	4	68.873				5593
3918	-36	1638	8.0	M0	11 17.692	0.06	4	70.435	-36 40 16.11	0.30	4	70.435				5594
3919	-41	1321	9.0	G5	11 17.733	0.09	4	70.668	-41 06 09.86	0.06	4	70.668				499
3920	-38	1481	8.2	K2	11 21.893	0.07	4	70.442	-38 08 31.62	0.17	4	70.442				5595
3921	-0	659	8.7	K5	4 11 27.550	0.11	2	71.403	-0 37 30.99	0.15	2	71.403				5596
3922	-17	825	8.7	A3	11 27.896	0.01	2	71.398	-17 35 56.23	0.05	2	71.398				5597
3923	-25	1786	7.5	K0	11 31.576	0.15	3	69.169	-25 39 18.50	0.22	3	69.169				5598
3924	-15	745	8.2	K0	11 45.917	0.15	2	71.261	-15 09 23.15	0.04	2	71.261				5599
3925	-66	264	8.11	G5	11 48.223	0.12	4	69.237	-66 45 00.50	0.10	4	69.237		5110		18814
3926	-67	292	8.4	K0	4 11 48.530	0.22	4	69.612	-67 41 04.56	0.11	4	69.612				18815
3927	+1	722	7.9	G5	11 49.706	0.14	2	70.472	+1 32 03.29	0.55	2	70.472				5600
3928	-40	1286	6.38	G5	11 52.749	0.11	6	70.480	-40 29 01.21	0.14	6	70.480	2307	5112	870	32307
3929	-64	309	8.9	K2	11 53.386	0.08	4	69.370	-64 28 06.30	0.11	4	69.370				18816
3930	-7	773	8.4	K0	11 58.280	0.13	2	71.381	-7 05 57.87	0.18	2	71.381				5601
3931	-30	1710	7.11	K0	4 12 04.272	0.10	6	69.858	-30 14 16.82	0.17	6	69.858	2308	5117	872	32308
3932	-24	2171	7.6	A5	12 05.001	0.15	4	68.912	-24 19 49.69	0.16	4	68.912				5602
3933	-2	844	7.8	K5	12 05.554	0.03	2	71.402	-2 15 53.10	0.04	2	71.402				5603
3934	-37	1663	8.8	--	12 05.654	0.12	4	71.015	-37 10 55.41	0.12	4	71.015				5604
3935	-37	1664	6.80	K0	12 08.619	0.07	6	70.459	-37 09 19.95	0.11	6	70.459	2309	5118	873	32309
3936	-46	1345	8.5	K5	4 12 15.264	0.17	5	71.081	-46 18 41.93	0.18	5	71.081				500
3937	-50	1314	8.5	M0	12 15.761	0.07	4	69.831	-50 42 41.96	0.12	4	69.831				501
3938	-42	1425	3.83	K0	12 20.675	0.03	78	71.533	-42 25 04.53	0.04	77	71.526	155	5121	874	30155
3939	-5	857	8.4	F8	12 23.891	0.17	2	71.487	-5 31 17.17	0.33	2	71.487				5605
3940	-10	872	8.4	K0	12 25.395	0.14	3	72.316	-10 41 35.53	0.45	3	72.316				5606
3941	-1	604	8.4	G5	4 12 26.182	0.26	2	71.476	-1 07 18.48	0.06	2	71.476				5607
3942	-79	135	8.9	G5	12 27.121	0.09	4	70.195	-79 28 16.04	0.45	4	70.195				18817
3942	SP				12 27.150	0.21	4	70.841	-79 28 16.12	0.32	4	70.841				18817
3943	-51	1057	7.40	K0	12 29.674	0.41	4	70.540	-51 43 07.70	0.06	4	70.540		5124		502
3944	+2	667	8.3	A0	12 29.746	0.02	2	71.970	+3 07 19.50	0.02	2	71.970				5608
3945	+3	575	8.0	A0	4 12 30.719	0.05	2	71.481	+3 49 58.83	0.03	2	71.481				5609
3946	-40	1290	9.0	K0	12 35.857	0.04	3	70.164	-39 57 02.81	0.08	3	70.164				503
3947	-14	848	8.5	G5	12 40.597	--	1	71.853	-14 31 48.05	--	1	71.853				5610
3948	-39	1400	8.6	G5	12 47.185	0.08	4	70.944	-39 05 42.63	0.23	4	70.944				5611
3949	+8	657	4.32	B3	12 48.981	0.03	61	71.088	+8 46 06.62	0.04	59	71.110	1118	5134	878	81118
3950	-16	819	8.6	A5	4 12 56.274	--	1	71.855	-16 19 14.63	--	1	71.855				5612
3951	-20	812	8.8	K5	12 59.453	0.05	4	69.380	-20 06 47.51	0.18	4	69.380				5613
3952	-16	820	6.89	B9	13 10.731	--	1	71.845	-16 34 08.83	--	1	71.845		5143		5614
3953	-3	727	8.5	A2	13 14.534	--	1	71.872	-3 39 08.10	--	1	71.872				5615
3954	-32	1683	8.12	K0	13 15.992	0.06	4	70.324	-31 54 48.71	0.05	4	70.324		5148		5616
3955	-8	815	7.6	K0	4 13 18.459	--	1	72.837	-8 45 37.95	--	1	72.837				5617
3956	-69	252	8.61	G5	13 21.299	0.16	5	70.985	-69 14 44.77	0.41	4	70.801		5149		18818
3957	-34	1593	8.7	K0	13 22.933	0.24	4	70.433	-34 30 36.93	0.16	4	70.433				5618
3958	-70	287	7.03	F0	13 29.490	0.11	6	70.699	-70 32 45.09	0.09	6	70.699	2311	5154		32311
3959	+0	722	8.6	G5	13 32.261	--	1	72.845	+0 28 27.84	--	1	72.845				5619
3960	-28	1474	8.7	K2	4 13 34.862	0.17	4	70.757	-28 31 10.18	0.08	4	70.757				5620
3961	-30	1723	8.7	K0	13 42.047	0.14	4	71.368	-30 40 47.83	0.14	4	71.368				5621
3962	-59	321	8.9	G5	13 42.557	0.08	4	70.226	-59 12 50.01	0.18	4	70.226				5622
3963	-62	332	3.36	G5	13 46.622	0.09	22	70.962	-62 35 54.27	0.09	22	70.962	156	5164	882	30156
3964	-73	251	7.54	F8	13 46.705	0.10	4	70.606	-72 56 44.69	0.16	4	70.606		5163		18819
3965	-8	820	8.8	K0	4 13 49.295	--	1	72.842	-8 19 24.03	--	1	72.842				5623
3966	-53	670	9.0	M1	13 51.274	0.06	3	70.302	-53 07 58.29	0.14	3	70.302				5624
3967	-62	333	9.0	K5	13 53.070	0.13	3	70.547	-62 06 31.76	0.15	3	70.547				5625
3968	-0	668	8.3	G0	13 57.282	--	1	72.760	-0 41 39.60	--	1	72.760				5626
3969	-32	1688	8.5	F8	14 00.047	0.17	4	70.456	-32 06 42.00	0.17	4	70.456				5627
3970	-22	792	8.3	K0	4 14 01.010	0.12	4	70.443	-22 41 06.39	0.11	4	70.443				5628
3971	-2	848	8.2	A0	14 04.115	--	1	72.878	-2 29 57.48	--	1	72.878				5629
3972	-18	795	7.6	K0	14 04.391	0.09	2	72.413	-17 59 52.67	0.14	2	72.413				5630
3973	-55	618	8.9	K2	14 08.934	0.23	4	70.494	-54 59 17.01	0.18	4	70.494				5631
3974	-35	1632	8.14	F5	14 10.553	0.16	4	70.896	-35 23 18.18	0.17	4	70.896		5168		5632

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
3975	-1	609	8.6	K0	14 12.740	--	1	72.880	-1 15 58.22	--	1	72.880				5633
3976	-10	882	7.9	A2	14 12.931	--	1	72.758	-10 12 31.35	--	1	72.758				5634
3977	-30	1725	8.7	K0	14 16.160	0.18	3	71.274	-29 51 48.10	0.08	3	71.274				5635
3978	-15	757	8.3	K2	14 27.719	--	1	71.894	-14 58 56.15	--	1	71.894				5636
3979	+2	673	7.4	G5	14 41.051	--	1	71.853	+2 24 28.16	--	1	71.853				5637
3980	-51	1066	4.36	F5	4 14 43.042	0.04	29	70.606	-51 36 39.30	0.05	27	70.569	157	5179	883	30157
3981	-61	316	8.8	K5	14 44.040	0.08	4	71.183	-61 20 04.78	0.14	4	71.183				5638
3982	-55	620	8.7	K0	14 45.135	0.16	5	70.523	-55 46 08.46	0.08	4	70.382				5639
3983	-71	256	8.6	K2	14 49.645	0.18	4	70.376	-70 53 01.28	0.10	4	70.376				18820
3984	-41	1349	9.0	K0	14 50.775	0.21	4	70.985	-40 58 34.31	0.20	4	70.985				504
3985	-82	85	9.4	G0	4 14 52.251	0.13	6	70.378	-82 43 01.98	0.23	6	70.378				18821
3985	SP				14 52.271	0.10	4	70.429	-82 43 02.26	0.23	4	70.429				18821
3986	-29	1654	7.7	A2	14 55.735	0.21	4	70.463	-29 00 57.00	0.04	4	70.463				5640
3987	-44	1479	8.5	G0	15 01.882	0.09	4	70.851	-44 31 55.40	0.18	4	70.851				505
3988	-13	852	8.2	A0	15 06.679	0.12	2	70.566	-13 36 03.62	0.27	2	70.566				5641
3989	-47	1323	8.0	K0	4 15 09.202	0.12	4	70.623	-47 13 07.10	0.14	4	70.623				506
3990	-58	364	8.7	K2	15 15.530	0.14	4	70.563	-58 25 24.66	0.19	4	70.563				5642
3991	-73	256	9.0	K0	15 17.041	0.21	3	70.124	-73 46 06.46	0.06	3	70.124				18822
3992	-51	1072	8.0	K0	15 21.545	0.09	6	71.215	-51 43 26.01	0.26	4	71.434				507
3993	-30	1742	8.9	K5	15 21.677	0.12	3	70.852	-30 34 33.73	0.11	3	70.852				5643
3994	+21	618	5.56	A5	4 15 25.523	0.15	6	70.050	+21 27 30.95	0.23	6	70.050	2313	5189	884	32313
3995	-86	48	7.93	A3	15 27.235	0.10	4	70.446	-86 22 30.56	0.14	4	70.446				18823
3995	SP				15 26.699	0.25	4	70.843	-86 22 30.32	0.27	4	70.843				18823
3996	-35	1639	9.3	K0	15 27.839	0.10	4	70.782	-35 00 52.08	0.10	4	70.782				5644
3997	-21	829	8.4	K0	15 27.906	0.14	4	70.766	-21 22 18.24	0.21	4	70.766				5645
3998	-24	2218	8.5	K0	4 15 33.535	0.17	4	70.142	-23 55 11.54	0.09	4	70.142				5646
3999	-2	858	8.5	A0	15 47.407	--	1	71.866	-2 31 22.23	--	1	71.866				5647
4000	+4	672	8.2	K2	15 53.315	--	1	71.899	+4 49 51.85	--	1	71.899				5648
4001	-76	265	7.31	K0	15 55.111	0.10	6	70.343	-75 55 51.96	0.11	6	70.343	2314	5197		18824
4001	SP				15 55.086	0.22	6	71.300	-75 55 51.84	0.25	6	71.300	2314	5197		18824
4002	-36	1666	8.6	K0	4 16 04.696	0.13	6	70.945	-36 12 49.67	0.10	6	70.945				5649
4003	-19	875	8.5	K5	16 06.513	0.16	2	71.992	-19 21 15.74	--	1	71.888				5650
4004	+2	681	8.4	G5	16 07.024	0.41	2	71.977	+3 01 43.35	0.12	2	71.977				5651
4005	-52	513	8.8	K0	16 20.391	0.19	4	70.761	-52 36 16.84	0.05	4	70.761				5652
4006	-41	1365	8.5	K2	16 20.513	0.05	4	70.337	-41 26 57.78	0.15	4	70.337				508
4007	-39	1427	8.9	F5	4 16 22.958	0.07	4	70.878	-39 41 40.35	0.04	4	70.878				5653
4008	-12	855	8.5	K0	16 26.293	--	1	71.943	-11 51 26.31	--	1	71.943				5654
4009	-69	256	8.2	K2	16 27.829	0.05	4	70.567	-68 54 32.53	0.14	4	70.567				18825
4010	-45	1481	7.78	G0	16 27.958	0.12	3	70.569	-45 46 20.48	0.16	3	70.569		5209		509
4011	-65	323	8.8	G0	16 28.770	0.04	4	70.855	-65 45 04.41	0.14	4	70.855				18826
4012	-38	1520	8.0	G5	4 16 32.189	0.13	4	70.514	-38 13 48.52	0.06	4	70.514				5655
4013	-63	314	8.60	G5	16 42.928	0.11	5	71.108	-63 12 59.04	0.07	5	71.108		5217		5656
4014	-57	639	7.8	K5	16 45.404	0.12	5	70.770	-57 25 44.17	0.31	5	70.770				5657
4015	-6	870	8.8	K0	16 47.140	0.25	2	71.391	-6 38 33.33	0.11	2	71.391				5658
4016	-13	858	8.6	K	16 48.768	0.01	2	72.455	-13 26 55.44	0.23	2	72.455				5659
4017	-27	1650	8.6	F8	4 16 49.581	0.06	4	70.353	-26 51 12.59	0.15	4	70.353				5660
4018*	-34	1622	7.91	G0	16 54.804	0.20	4	70.332	-34 14 29.37	0.10	4	70.332		5222		5661
4019	-56	656	7.78	K0	16 55.538	0.05	4	70.342	-56 18 25.10	0.15	4	70.342		5224		5662
4020	+15	612	3.86	K0	16 56.821	0.06	14	71.654	+15 30 30.20	0.06	14	71.654	159	5226	889	30159
4021	-8	829	6.94	A0	17 05.922	0.24	2	72.432	-8 14 20.51	0.31	2	72.432		5231		5663
4022	-31	1794	7.8	G5	4 17 07.557	0.09	4	70.453	-31 26 50.34	0.11	4	70.453				5664
4023	-48	1287	7.97	K0	17 13.099	0.07	4	70.166	-48 42 39.23	0.12	4	70.166		5239		510
4024	-15	765	8.0	A5	17 16.784	--	1	71.951	-15 17 21.36	--	1	71.951				5665
4025	-64	320	8.1	K0	17 19.330	0.13	4	70.095	-64 01 48.71	0.20	4	70.095				5666
4026	-72	295	7.71	G5	17 21.685	0.14	4	70.503	-72 07 08.39	0.14	4	70.503		5242		18827
4027	-53	679	6.00	F5	4 17 25.934	0.11	5	70.302	-52 58 50.24	0.18	5	70.302	2318	5245	892	32318
4028	-50	1342	9.1	G5	17 29.222	0.13	4	70.440	-49 57 31.11	0.07	4	70.440				511
4029	-26	1629	7.6	F0	17 30.063	0.06	4	69.886	-26 04 34.83	0.14	4	69.886				5667
4030	-12	858	6.92	G5	17 33.186	0.32	3	71.563	-12 31 05.78	0.12	3	71.563		5247		5668
4031	-58	371	8.3	K2	17 37.268	0.02	5	69.486	-58 32 12.80	0.28	4	69.153				5669
4032	-17	854	8.0	K2	4 17 38.649	0.01	2	71.838	-17 34 59.38	0.15	2	71.838				5670
4033	-47	1338	7.5	K0	17 39.670	0.08	4	70.588	-47 41 13.98	0.41	4	70.588				512
4034	-4	800	8.5	G0	17 42.444	0.14	3	72.659	-4 36 42.92	0.22	3	72.659				5671
4035	-10	895	8.6	F2	17 50.334	0.21	2	72.030	-10 37 13.23	0.14	2	72.030				5672
4036	-16	838	6.65	B9	17 53.184	0.02	120	70.932	-16 33 21.48	0.03	116	70.926	1119	5255	894	81119
4037*	-1	619	6.73	A3	4 17 56.644	0.08	2	71.323	-1 26 04.80	0.03	2	71.323		5257		5673
4038	+5	631	5.90	G5	18 01.105	0.15	6	70.566	+6 00 45.93	0.12	6	70.566	2320	5259		32320
4039	-43	1381	8.0	K0	18 05.331	0.11	5	70.241	-43 35 55.25	0.09	5	70.241				513
4040	-9	873	8.6	K0	18 15.248	0.03	2	71.955	-9 16 03.45	0.17	2	71.955				5674
4041	-42	1465	9.0	G5	18 16.388	0.19	4	70.073	-42 47 42.40	0.12	4	70.073				514
4042	-7	798	5.72	B8	4 18 17.201	0.06	6	71.119	-7 42 38.61	0.12	6	71.119	2322	5267	896	32322
4043	-18	811	8.5	K2	18 19.628	0.17	2	71.820	-17 51 29.88	0.03	2	71.820				5675
4044	-83	87	8.41	G5	18 21.094	0.09	4	69.941	-83 43 31.13	0.22	4	69.941		5268		18828
4044	SP				18 20.954	0.13	4	70.996	-83 43 30.99	0.15	4	70.996		5268		18828
4045	-20	831	5.31	A0	18 28.068	0.04	42	71.271	-20 45 27.66	0.05	41	71.284	161	5270	897	30161

4018 SDS, 8.3m-9.3m, 0°4, 212°.

4037 7.5m-7.5m, 0°2, 6°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Deci 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
4046	+ 0	734	7.87	K2	4 18 29.765	0.18	2	71.473	+ 1 04 35.38	0.50	2	71.473			898	5676
4047	-62	337	8.1	K0	18 30.932	0.13	4	69.200	-62 33 46.14	0.22	4	69.200				5677
4048	- 4	806	7.3	G5	18 31.826	0.23	2	71.865	- 3 50 12.35	0.06	2	71.865				5678
4049	+ 4	678	8.7	G5	18 34.093	--	1	71.842	+ 4 20 51.83	--	1	71.842				5679
4050	- 5	883	8.5	K0	18 35.802	0.08	2	71.310	- 5 40 33.72	0.35	2	71.310				5680
4051	-25	1849	8.5	K0	4 18 39.105	0.12	3	69.862	-24 50 40.94	0.28	3	69.862				5681
4052	-53	686	8.3	K5	18 42.603	0.08	4	69.572	-53 04 32.75	0.11	4	69.572				5682
4053*	+ 5	636	8.7	F0	18 58.601	0.30	2	70.350	+ 5 16 18.40	0.64	2	70.350				25677
4054	-54	652	8.4	G5	19 00.892	0.11	4	70.051	-54 48 38.13	0.15	4	70.051				5683
4055	-33	1691	8.2	G5	19 04.484	0.15	4	69.739	-32 59 36.56	0.17	4	69.739				5684
4056	+ 2	692	6.92	F5	4 19 10.068	0.54	2	71.293	+ 2 16 26.34	0.03	2	71.293		5284		5685
4057	- 6	880	9.8v	A5	19 13.012	0.20	4	71.433	- 6 08 09.78	0.01	4	71.433				25678
4058	-37	1715	8.0	G5	19 23.981	0.15	4	69.726	-37 39 08.17	0.08	4	69.726				5686
4059	-24	2273	9.0	G5	19 25.972	0.07	4	70.321	-24 24 34.13	0.14	4	70.321				5687
4060	-10	902	8.3	K5	19 40.644	0.13	2	71.339	-10 04 05.74	0.12	2	71.339				5688
4061	-45	1502	7.5	G5	4 19 42.059	0.06	4	69.866	-45 09 39.95	0.14	4	69.866				515
4062	-15	771	8.4	K0	19 43.386	0.08	3	71.125	-15 40 47.65	0.16	3	71.125				5689
4063	+ 3	595	8.8	B9	19 52.815	0.05	2	70.485	+ 3 17 36.69	0.10	2	70.485				5690
4064	- 0	690	8.2	K0	19 54.925	0.22	2	71.331	- 0 40 05.13	0.03	2	71.331				5691
4065	-32	1738	9.1	G5	19 57.683	0.09	4	69.707	-32 18 17.44	0.12	4	69.707				5692
4066	+17	712	3.93	K0	4 20 03.014	0.05	16	71.770	+17 25 36.15	0.11	16	71.770	162	5304	904	30162
4067	-59	336	8.5	M0	20 10.398	0.19	4	70.420	-59 16 51.86	0.22	4	70.420				5693
4068	- 2	883	8.3	A2	20 11.190	0.04	2	71.317	- 2 21 36.72	0.22	2	71.317				5694
4069	-19	900	8.7	K5	20 16.337	0.06	2	70.513	-18 59 05.57	0.13	2	70.513				5695
4070	-76	269	8.4	G0	20 25.615	0.06	4	70.472	-75 50 10.25	0.14	4	70.472				18829
4070 SP					4 20 25.462	0.24	4	71.028	-75 50 10.24	0.25	4	71.028				18829
4071	-77	167	8.5	K0	20 32.276	0.13	4	69.620	-77 10 27.87	0.39	4	69.620				18830
4071 SP					20 32.015	0.57	4	70.500	-77 10 28.04	0.24	3	70.238				18830
4072	-20	837	8.5	A2	20 35.016	0.05	4	69.839	-20 21 31.34	0.14	4	69.839				5696
4073	-66	276	8.63	G5	20 37.284	0.09	4	70.168	-66 21 27.80	0.13	4	70.168		5318		18831
4074	-31	1823	9.1	K0	4 20 39.457	0.09	4	69.864	-31 11 06.58	0.18	4	69.864				5697
4075	-21	853	8.9	K0	20 43.797	0.18	3	69.500	-21 42 48.41	0.00	3	69.500				5698
4076	- 5	895	7.70	K2	20 46.590	0.30	2	71.376	- 5 07 15.22	0.35	2	71.376		5321		5699
4077	-60	304	8.7	K0	20 52.195	0.15	4	69.827	-60 26 46.21	0.06	4	69.827				5700
4078	- 8	846	7.2	K0	20 54.285	0.25	2	71.503	- 7 49 11.49	0.45	2	71.503				5701
4079	-30	1796	8.3	K0	4 20 55.196	0.10	4	70.125	-29 52 14.56	0.13	4	70.125				5702
4080	-22	813	8.7	K0	20 57.207	0.07	4	70.624	-22 14 09.09	0.19	4	70.624				5703
4081	-25	1862	5.98	K5	21 00.172	0.14	6	70.150	-25 00 26.98	0.09	6	70.150	2323	5324		32323
4082	- 4	818	5.23	A2	21 11.243	0.03	38	72.024	- 3 51 35.96	0.04	38	72.024	1120	5327	906	31120
4083	-35	1686	8.5	G5	21 13.764	0.16	4	70.584	-35 34 33.82	0.08	4	70.584				5705
4084	-36	1698	7.8	G5	4 21 13.866	0.21	4	70.322	-36 36 23.37	0.11	4	70.322				5704
4085	-25	1868	7.5	G0	21 15.298	0.04	4	69.365	-25 30 28.25	0.24	4	69.365				5706
4086	-45	1513	8.2	K0	21 16.037	0.07	4	69.868	-45 36 03.55	0.12	4	69.868				516
4087	-80	116	5.62	K0p	21 18.331	0.06	24	71.563	-80 19 57.41	0.07	23	71.541	166	5332	910	30166
4087 SP					21 18.268	0.05	39	70.892	-80 19 57.38	0.10	36	70.862	166	5332	910	50166
4088	-78	135	8.0	K0	4 21 19.820	0.18	5	70.372	-78 09 22.49	0.18	4	70.442				18832
4088 SP					21 19.831	0.13	4	70.926	-78 09 23.24	0.30	4	70.926				18832
4089	-63	324	5.18	K0	21 20.788	0.03	79	71.025	-63 30 13.36	0.04	75	71.004	163	5333	911	30163
4090	-17	867	8.8	K0	21 21.544	--	1	71.847	-17 39 46.88	--	1	71.847				5707
4091	-27	1685	8.2	G0	21 27.030	0.18	4	69.174	-27 46 21.55	0.25	4	69.174				5708
4092	-19	907	8.0	A0	4 21 28.000	0.05	3	72.298	-19 35 16.26	0.46	2	72.399				5709
4093	-12	877	8.4	K5	21 33.136	0.10	2	71.284	-12 40 41.85	0.26	2	71.284				5711
4094	-41	1397	8.5	K0	21 41.553	0.14	4	70.401	-41 21 48.57	0.09	4	70.401				517
4095	-62	345	8.94	K2	21 45.712	0.17	5	70.835	-61 57 01.62	0.18	5	70.835		5342		5712
4096	-40	1366	8.5	K0	21 54.294	0.13	4	70.585	-40 30 35.82	0.15	4	70.585				518
4097	-51	1112	9.0	K0	4 22 07.220	0.06	4	69.851	-51 08 28.24	0.08	4	69.851				519
4098	-34	1664	4.06	K5	22 09.526	0.03	87	71.155	-34 07 53.60	0.03	86	71.144	1121	5349	913	31121
4099	-31	1837	9.1	K2	22 09.811	0.12	4	69.703	-30 57 41.91	0.16	4	69.703				5713
4100	- 6	898	8.6	G5	22 16.811	0.13	2	70.478	- 5 48 13.38	0.10	2	70.478				5714
4101	- 9	894	7.71	A0	22 22.091	0.24	2	70.458	- 9 20 13.74	0.07	2	70.458			914	5715
4102	-35	1699	8.1	K0	4 22 33.285	0.10	4	70.465	-35 23 39.67	0.10	4	70.465				5716
4103	-47	1363	7.8	K0	22 35.571	0.12	4	70.402	-47 16 15.18	0.26	4	70.402				520
4104	+ 1	749	8.2	A3	22 48.839	0.14	3	70.865	+ 1 06 17.91	0.10	2	71.249				5717
4105	-21	859	8.3	G5	22 51.367	0.09	4	69.205	-21 19 28.01	0.06	4	69.205				5718
4106*	-49	1320	9.1	G5	22 51.706	0.03	4	71.000	-49 02 58.35	0.07	4	71.000				521
4107	-37	1740	8.5	G5	4 22 52.299	0.08	5	70.676	-37 43 30.02	0.15	4	70.821				5719
4108	- 4	827	8.0	A0	22 56.539	0.17	2	70.484	- 3 52 55.58	0.18	2	70.484				5720
4109*	-48	1334	9.0	G0	22 59.812	0.05	4	70.730	-48 15 55.51	0.17	4	70.730				522
4110	-80	117	8.6	F5	22 59.858	0.15	4	69.719	-80 14 11.37	0.17	4	69.719				18833
4110 SP					22 59.768	0.30	5	70.863	-80 14 11.25	0.33	4	70.767				18833
4111	+ 2	706	8.7	K0	4 23 03.343	0.04	2	71.354	+ 2 48 03.88	0.02	2	71.354				5721
4112	-38	1565	8.6	G0	23 06.591	0.12	4	70.457	-38 26 53.00	0.28	4	70.457				5722
4113	-17	875	8.4	K5	23 15.968	0.10	2	71.354	-17 17 45.75	0.08	2	71.354				5723
4114	-56	667	7.98	K0	23 16.239	0.10	4	69.689	-55 56 51.47	0.15	4	69.689		5368		5724
4115	-10	916	8.4	G5	23 16.802	0.03	2	71.398	-10 41 59.11	0.01	2	71.398				5725

4053 A 3153AB, 9.8m-9.8m, 1st2, 191°.
4057 9.8m to 12.6m.

4106 9.3m-9.6m, 0th5, 272°.
4109 SDS, 9.8m-10.2m, 0th9, 61°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
4116	+22	696	4.40	A5	23 18.831	0.12	6	69.912	+22 42 05.60	0.13	6	69.912	2326	5370	921	32326
4117	-16	853	8.2	K0	23 18.943	0.38	3	71.768	-16 31 52.57	0.15	3	71.768				5726
4118	-45	1530	8.9	G5	23 20.776	0.18	4	69.909	-44 50 33.29	0.15	4	69.909				523
4119	+4	691	6.53	K0	23 22.959	0.05	2	71.284	+4 15 40.15	0.00	2	71.284		5373		5727
4120	+0	754	8.8	K2	23 28.241	0.07	2	71.414	+0 34 05.62	0.20	2	71.414				5728
4121	+8	687	5.99	B5	23 38.185	0.06	6	69.873	+8 28 41.52	0.04	6	69.873	2327	5378	922	32327
4122	-35	1713	8.2	K5	23 40.509	0.05	4	70.316	-34 57 29.36	0.11	4	70.316				5729
4123	-60	306	9.1	K0	23 43.830	0.09	4	69.157	-60 46 21.85	0.15	4	69.157				5730
4124	-67	316	7.15	A3	23 44.304	0.09	6	69.218	-66 51 03.98	0.14	6	69.218	2328	5379		32328
4125	-43	1420	8.9	G5	23 46.274	0.08	4	70.194	-43 15 29.09	0.13	4	70.194				524
4126	-18	835	8.0	K0	23 46.523	0.22	2	71.370	-17 58 43.22	0.07	2	71.370				5731
4127	-0	702	7.5	K2	23 53.999	0.05	2	71.346	-0 37 22.62	0.20	2	71.346				5732
4128	-32	1778	9.1	K5	23 55.831	0.17	4	70.389	-32 23 51.92	0.08	4	70.389				5733
4129	-33	1723	8.6	K0	23 56.901	0.14	4	70.379	-33 04 07.77	0.12	4	70.379				5734
4130	-40	1386	8.50	M3	23 57.632	0.08	5	70.413	-39 56 54.75	0.12	5	70.413		5384		5735
4131	-52	521	8.19	K0	24 09.035	0.09	4	70.547	-52 02 52.76	0.16	4	70.547		5390		5736
4132	-4	831	8.0	F0	24 09.163	0.15	2	71.802	-3 52 44.84	0.14	2	71.802				5737
4133	-21	868	8.7	K0	24 13.395	0.13	4	70.334	-21 37 10.54	0.14	4	70.334				5738
4134	-26	1676	8.1	K2	24 18.630	0.22	4	69.809	-26 23 33.91	0.10	4	69.809				5739
4135	-58	380	8.7	K5	24 23.479	0.23	5	70.629	-57 51 31.22	0.14	4	70.583				5740
4136	-2	904	8.5	K0	24 24.222	0.27	2	71.967	-2 16 26.03	0.09	2	71.967				5741
4137	-23	1927	8.4	A0	24 24.378	0.15	5	70.667	-23 14 48.01	0.23	5	70.667				5742
4138	+1	753	6.37	K0	24 24.645	0.02	2	71.980	+1 58 06.55	0.02	2	71.980		5399	926	5743
4139	+3	603	8.6	A0	24 25.268	0.63	2	72.012	+4 10 10.94	0.15	2	72.012				5744
4140	-7	814	9.1	A0	24 26.058	--	1	71.864	-7 42 15.45	--	1	71.864				5745
4141	-50	1387	9.0	G5	24 28.305	0.19	5	70.656	-50 20 15.66	0.27	5	70.656				525
4142	-14	903	7.7	K5	24 28.878	0.17	2	71.961	-14 43 56.92	0.09	2	71.961				5746
4143	-69	273	7.92	K0	24 38.278	0.16	4	69.805	-69 06 22.46	0.27	4	69.805		5404		18834
4144	-9	899	8.7	A0	24 44.405	0.10	2	71.007	-9 00 34.53	0.04	2	71.007				5747
4145	-23	1931	8.6	K0	24 44.635	0.20	4	70.466	-23 04 08.71	0.27	4	70.466				5748
4146*	-24	2343	6.14	A2	24 50.643	0.14	4	70.631	-24 11 32.89	0.07	4	70.631		5409		5749
4147	-6	911	8.3	A0	24 53.266	0.10	3	71.375	-5 57 17.08	0.18	2	72.015				5750
4148	-56	672	8.9	G5	24 59.744	0.14	4	70.405	-56 38 15.58	0.26	4	70.405				5751
4149	-28	1552	8.3	K2	25 01.329	0.05	4	70.730	-28 46 56.94	0.08	4	70.730				5752
4150	-8	864	8.5	K2	25 06.828	--	1	71.957	-8 18 08.06	--	1	71.957				5753
4151	-20	851	8.5	F0	25 13.037	0.14	4	71.214	-20 29 00.45	0.11	4	71.214				5754
4152	-46	1416	9.1	G5	25 24.987	0.15	4	70.142	-46 16 56.84	0.18	4	70.142				526
4153	-30	1832	8.3	K0	25 27.705	0.07	2	71.380	-30 04 16.07	0.09	2	71.380				5755
4154	-19	929	8.1	G0	25 29.679	0.09	2	71.388	-19 28 01.91	0.13	2	71.388				5756
4155	-42	1503	8.5	G5	25 30.895	0.10	4	70.618	-42 45 22.06	0.15	4	70.618				527
4156	-18	845	8.4	K0	25 33.594	--	1	71.959	-18 12 40.06	--	1	71.959				5757
4157	-12	900	8.6	K0	25 36.009	--	1	71.967	-12 07 22.89	--	1	71.967				5758
4158	-47	1383	6.18	F5	25 37.786	0.11	6	70.820	-47 03 21.24	0.14	6	70.820	2329	5428	930	32329
4159	-63	330	8.5	G5	25 39.185	0.14	4	70.702	-62 51 53.52	0.17	4	70.702				5759
4160	+18	640	3.63	K0	25 41.750	0.03	50	71.087	+19 04 15.54	0.05	50	71.087	164	5430	931	80164
4161	-33	1738	8.5	K0	25 45.541	0.19	4	70.047	-33 16 18.44	0.24	4	70.047				5760
4162	-74	290	9.5	G0	25 46.460	0.26	5	71.011	-74 37 15.53	0.07	5	71.011				18835
4163	-67	317	9.1	K5	25 47.998	0.19	4	71.110	-67 41 00.02	0.32	3	70.453				18836
4164	+1	757	5.50	B8	25 56.917	0.09	16	71.178	+1 16 16.79	0.10	16	71.178	1123	5441	935	31123
4165	-7	818	8.7	K0	25 57.169	--	1	71.864	-7 01 59.48	--	1	71.864				5761
4166	+12	598	5.12	A5	26 02.036	0.10	6	70.760	+12 56 18.04	0.13	6	70.760	2330	5443	936	32330
4167*	-65	339	8.3	K0	26 02.868	0.09	4	70.941	-65 45 41.56	0.13	4	70.941				18837
4168	+27	661	6.61	A0	26 14.276	0.08	4	71.693	+27 17 43.63	0.25	4	71.693	2331	5447	937	32331
4169	-73	261	9.2	G0	26 15.386	0.14	4	70.865	-73 26 15.11	0.12	4	70.865				18838
4170	-49	1339	9.0	G5	26 17.107	0.13	4	70.544	-49 06 04.14	0.12	4	70.544				528
4171	-51	1138	8.5	K0	26 18.212	0.09	4	70.507	-51 24 21.30	0.05	4	70.507				529
4172	-82	89	8.1	K2	26 24.677	0.12	4	69.965	-81 53 33.41	0.07	4	69.965				18839
4172 SP					26 24.687	0.14	5	71.044	-81 53 32.83	0.31	4	70.993				18839
4173	-31	1869	8.3	F5	26 25.928	0.12	4	70.388	-31 33 54.86	0.11	4	70.388				5762
4174	-10	926	8.6	A0	26 31.682	0.11	2	72.010	-10 07 49.19	0.07	2	72.010				5763
4175	-15	796	7.7	K5	26 33.327	0.08	2	71.510	-15 05 18.34	0.04	2	71.510				5764
4176	-13	892	8.2	G0	26 40.055	0.37	3	71.984	-13 46 12.72	0.25	2	71.928				5765
4177	-13	893	5.50	B3p	26 47.497	0.08	7	71.953	-13 09 26.11	0.08	6	71.931	2332	5458	939	32332
4178	-2	915	7.9	K0	26 55.117	0.13	2	70.472	-2 31 19.10	0.17	2	70.472				5766
4179	-70	303	8.9	K0	27 01.303	0.27	4	70.256	-70 29 28.34	0.18	4	70.256				18840
4180	-20	859	8.6	K0	27 12.005	0.10	4	69.630	-20 34 26.88	0.11	4	69.630				5767
4181	-3	794	9.0	F0	27 12.504	0.39	2	72.341	-3 41 09.95	0.14	2	72.341				25705
4182	-54	669	8.3	G5	27 12.669	0.19	4	70.347	-54 08 41.10	0.09	4	70.347				5768
4183	-4	851	8.0	K0	27 14.851	0.34	2	71.409	-4 42 19.62	0.30	2	71.409				5769
4184	-62	359	8.9	K2	27 23.933	0.13	4	70.126	-62 18 33.21	0.13	4	70.126				5770
4185	-47	1395	9.4	K2	27 23.948	0.05	4	70.623	-46 57 42.66	0.09	4	70.623				530
4186	-28	1567	8.3	K2	27 33.588	0.19	4	69.360	-28 29 37.03	0.06	3	68.899				5771
4187	-35	1753	9.2	G0	27 37.463	0.14	4	70.478	-35 23 44.08	0.08	4	70.478				5772
4188*	-72	304	7.78	G5	27 41.152	0.13	4	70.169	-72 44 36.49	0.12	4	70.169		5479		18841
4189	-68	266	8.9	A2	27 41.779	0.12	4	69.846	-68 06 29.09	0.20	4	69.846				18842

4146 A 3230, 6.8m-7.0m, 0°5.
4167 8.8m-10.2m, 0°5, 275°.

4188 7.9m-10.2m, 1°3, 140°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
4190	-42	1523	8.0	K0	27 49.297	0.13	4	70.183	-42 39 22.97	0.16	4	70.183				531
4191	-33	1758	8.6	K5	28 04.746	0.18	4	70.164	-33 39 11.08	0.23	4	70.164				5773
4192	-39	1506	8.2	G5	28 05.324	0.11	5	70.410	-39 31 27.62	0.07	5	70.410				5774
4193	-30	1853	8.9	K2	28 05.683	0.06	4	69.391	-30 22 33.78	0.05	4	69.391				5775
4194	-10	933	8.8	K0	28 07.196	0.05	2	71.253	-10 01 21.09	0.06	2	71.253				5776
4195	-1	657	8.9	K0	28 09.587	0.01	2	71.347	-1 32 44.11	0.03	2	71.347				5777
4196	-45	1559	9.5	F5	28 14.082	0.19	3	70.335	-45 11 31.41	0.10	3	70.335				532
4197	-48	1363	8.5	K5	28 16.567	0.11	4	70.627	-48 28 49.08	0.06	4	70.627				533
4198	-16	878	8.8	G5	28 26.643	0.04	2	70.529	-16 33 35.96	0.14	2	70.529				5778
4199	-37	1782	8.8	K2	28 29.429	0.15	4	70.580	-37 07 10.04	0.12	4	70.580				5779
4200	+2	726	8.7	K0	28 32.087	0.24	2	71.335	+2 48 28.52	0.06	2	71.335				5780
4201	-64	342	8.0	M1	28 32.292	0.15	4	69.652	-64 40 26.24	0.17	4	69.652				18843
4202	-83	91	6.76	A2	28 33.061	0.02	195	70.940	-83 00 37.93	0.03	187	70.934	1658	5506	947	61658
4202	SP				28 33.061	0.02	182	71.270	-83 00 37.91	0.04	172	71.262	1658	5506	947	71658
4203	-32	1830	8.9	K0	28 35.743	0.12	4	70.438	-32 26 19.47	0.07	4	70.438				5781
4204	-21	895	7.9	A3	28 38.104	0.12	4	69.390	-21 28 52.51	0.12	4	69.390				5782
4205	-23	1985	8.1	K2	28 41.421	0.09	4	69.831	-23 30 52.89	0.07	4	69.831				5783
4206	+4	704	8.7	K0	28 46.828	0.03	2	71.332	+4 28 08.15	0.17	2	71.332				5784
4207	-35	1768	5.92	K0	28 50.921	0.08	6	69.906	-35 45 38.34	0.22	6	69.906	2334	5512	949	32334
4208	-25	1919	8.5	K0	28 54.670	0.08	3	69.217	-25 05 11.52	0.16	3	69.217				5785
4209	-41	1445	8.54	K2	29 02.011	0.11	5	70.683	-41 35 01.39	0.09	4	70.830		5518		534
4210	-59	351	9.2	G5	29 05.028	0.16	4	70.085	-59 01 54.22	0.20	4	70.085				5786
4211	-53	714	8.7	K0	29 06.385	0.07	4	70.111	-53 33 42.51	0.09	4	70.111				5787
4212	-1	660	8.6	G5	29 12.371	0.07	2	70.519	-1 27 30.15	0.07	2	70.519				5788
4213	-28	1578	8.3	G5	29 13.496	0.12	4	68.921	-27 57 04.62	0.24	4	68.921				5789
4214	-65	349	8.31	A0	29 13.972	0.04	4	70.243	-65 29 05.94	0.49	4	70.243		5523		18844
4215	-36	1755	8.2	M0	29 16.752	0.07	4	70.096	-36 20 59.19	0.16	4	70.096				5790
4216	-39	1517	8.83	K0	29 17.699	0.09	4	70.422	-38 51 11.50	0.17	4	70.422		5525		5791
4217	-45	1567	5.16	B3	29 18.104	0.03	124	71.325	-45 03 36.86	0.03	122	71.323	167	5527	954	30167
4218	-12	915	7.04	F5	29 36.943	0.04	2	70.843	-12 44 17.71	0.27	2	70.843		5537		5792
4219	+0	780	8.0	B8	29 49.723	0.22	2	70.873	+0 52 29.60	0.27	2	70.873				5793
4220	-5	948	8.1	G0	29 53.242	0.08	2	70.495	-5 08 38.46	0.24	2	70.495		5540		5794
4221	-13	910	8.9	A0	29 59.010	0.08	2	71.353	-13 41 30.27	0.14	2	71.353				5795
4222	-17	902	7.9	K0	30 12.092	0.14	2	71.317	-17 22 22.08	0.05	2	71.317				5796
4223	-30	1875	8.7	K2	30 21.080	0.11	4	68.634	-30 12 45.25	0.08	4	68.634				5797
4224	-58	393	9.1	K0	30 21.255	0.08	4	69.444	-58 35 15.03	0.27	4	69.444				5798
4225	-16	890	7.9	A3	30 41.901	0.12	2	71.278	-15 52 21.75	0.37	2	71.278				5799
4226	-46	1445	8.5	K0	30 42.302	0.12	4	69.700	-45 54 15.58	0.05	4	69.700				535
4227	-44	1605	8.5	G5	30 46.784	0.13	4	69.710	-44 03 43.05	0.14	4	69.710				536
4228	-40	1447	8.0	M0	30 54.037	0.09	4	69.893	-40 18 46.73	0.15	4	69.893				537
4229	+0	785	8.6	G5	30 56.912	0.11	2	70.485	+0 55 06.62	0.15	2	70.485				5800
4230	-26	1731	8.5	K0	30 59.706	0.04	3	69.227	-26 20 06.08	0.11	3	69.227				5801
4231	+14	720	4.75	A5	31 00.606	0.06	23	71.982	+14 44 26.92	0.10	22	71.977	1125	5558	959	31125
4232	-43	1466	8.5	K5	31 02.022	0.19	4	69.884	-43 32 19.86	0.16	4	69.884				538
4233	-8	879	8.2	F8	31 03.543	0.01	2	70.506	-7 56 35.25	0.06	2	70.506				5802
4234	-57	669	8.5	G5	31 04.769	0.25	4	69.832	-57 16 02.01	0.12	4	69.832				5803
4235	-4	865	8.0	K0	31 05.629	0.19	2	71.320	-4 05 00.23	0.05	2	71.320				5804
4236*	-31	1906	9.2	F0	31 07.450	0.10	4	69.582	-31 13 46.08	0.07	4	69.582				5805
4237	-35	1791	8.28	G5	31 08.017	0.12	5	70.133	-35 48 19.31	0.14	4	70.141		5563		5806
4238	-21	911	8.6	G0	31 10.390	0.07	4	69.824	-21 28 46.63	0.12	4	69.824				5807
4239	+1	768	8.7	G5	31 11.651	0.07	2	71.373	+1 42 23.59	0.11	2	71.373				5808
4240	-2	939	8.9	K0	31 12.159	0.06	2	71.338	-2 33 24.03	0.17	2	71.338				5809
4241	-61	347	9.06	K2	31 13.533	0.19	4	69.677	-61 29 21.59	0.18	4	69.677		5564		5810
4242	-24	2419	8.8	A3	31 18.682	0.06	4	69.659	-24 02 33.15	0.14	4	69.659				5811
4243	-32	1857	9.1	F0	31 19.886	0.14	4	70.568	-32 09 44.56	0.14	4	70.568				5812
4244	-50	1426	9.5	G5	31 22.158	0.16	5	70.279	-50 34 33.12	0.08	4	70.145				539
4245	-37	1799	8.7	K0	31 22.350	0.16	5	70.394	-37 03 01.56	0.14	5	70.394				5813
4246	-39	1539	7.7	F2	31 27.167	0.13	4	69.733	-39 35 24.52	0.10	4	69.733				5814
4247	-56	689	9.1	F5	31 27.395	0.11	4	70.078	-56 04 35.13	0.31	4	70.078				5815
4248	+5	679	5.78	A0	31 28.564	0.13	6	70.331	+5 27 54.80	0.14	6	70.331	2335	5570		32335
4249	+3	619	7.80	K0	31 37.229	0.21	2	70.801	+3 38 47.40	0.01	2	70.801			960	5816
4250	-19	956	8.5	K0	31 42.512	0.20	2	70.519	-19 16 53.15	0.12	2	70.519				5817
4251	-65	351	8.7	K0	31 43.328	0.16	5	70.884	-65 13 09.98	0.12	5	70.884				18845
4252	-8	887	5.45	M0	31 46.980	0.08	4	70.409	-8 20 04.55	0.06	4	70.409	2337	5576		32337
4253	-16	894	8.7	K2	31 51.046	0.02	2	71.377	-16 01 17.45	0.56	2	71.377				5818
4254	+0	789	7.48	G5	31 52.703	0.05	2	71.394	+0 18 17.19	0.17	2	71.394		5579		5819
4255	-29	1784	8.0	K0	32 03.615	0.19	4	69.479	-29 18 26.20	0.12	4	69.479				5820
4256	-65	352	8.8	G5	32 07.668	0.16	4	69.857	-64 57 26.54	0.11	4	69.857				18846
4257	-2	944	8.5	K0	32 17.720	0.21	2	71.939	-2 58 02.05	0.32	2	71.939				5821
4258	-11	904	8.6	G5	32 18.746	0.07	2	71.537	-11 44 18.40	0.19	2	71.537				5822
4259	-0	724	8.6	K5	32 18.940	0.09	2	71.493	-0 24 38.10	0.50	2	71.493				5823
4260	-28	1612	8.6	K0	32 29.875	0.20	4	70.408	-28 15 43.52	0.12	4	70.408				5824
4261	-7	845	8.5	A2	32 30.435	0.25	2	71.515	-7 05 54.83	0.06	2	71.515				5825
4262	-24	2433	6.57	G5	32 32.138	0.15	3	70.888	-24 08 35.44	0.09	3	70.888		5588		5826
4263	-8	891	8.8	A2	32 42.654	0.12	2	72.405	-8 47 44.12	0.38	2	72.405				5827

4236 SDS, 9.4m-11.4m, 0°9, 167°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
4264	-33	1806	7.32	G5	4 32 44.487	0.15	4	69.938	-33 44 55.88	0.05	4	69.938		5590		5828
4265	-10	959	6.69	A0	32 51.045	0.34	2	71.921	-9 50 17.95	0.16	2	71.921		5597		5829
4266	-35	1798	7.19	K0	32 53.355	0.14	4	69.718	-34 55 15.31	0.06	4	69.718		5598		5830
4267	-21	916	7.8	G5	32 54.249	0.06	4	70.835	-20 50 43.89	0.19	4	70.835				5831
4268	-55	663	3.47	A0p	32 54.898	0.04	37	71.318	-55 08 51.91	0.07	35	71.274	171	5600	961	30171
4269	-41	1476	9.0	K0	4 32 56.361	0.21	4	70.141	-40 56 06.96	0.16	4	70.141				540
4270	-26	1746	8.4	K0	32 58.739	0.12	4	70.681	-26 04 26.37	0.23	4	70.681				5832
4271	+16	629	1.06	K5	33 02.991	0.11	6	71.913	+16 24 33.16	0.23	6	71.913	168	5605	962	30168
4272	-67	327	8.6	K2	33 04.167	0.08	4	69.523	-67 25 12.30	0.11	4	69.523				18847
4273	-6	943	8.7	K5	33 06.647	--	1	71.872	-6 11 37.95	--	1	71.872				5833
4274	-36	1788	8.8	K0	4 33 10.603	0.18	4	70.165	-36 03 02.12	0.22	4	70.165				5834
4275	-9	934	8.5	K5	33 13.704	0.08	2	71.984	-9 16 35.50	0.03	2	71.984				5835
4276	-29	1793	8.7	A2	33 14.598	0.09	4	71.244	-29 44 17.61	0.26	3	71.412				5836
4277	-57	674	8.6	G5	33 18.001	0.06	4	70.549	-56 51 41.69	0.25	4	70.549				5837
4278	+3	623	8.7	G5	33 21.322	0.22	2	71.286	+3 58 10.32	0.01	2	71.286				5838
4279	-71	273	9.2	F2	4 33 24.336	0.15	4	70.254	-70 59 59.55	0.18	4	70.254				18848
4280	-75	274	8.2	G0	33 25.957	0.03	4	69.362	-75 47 03.68	0.14	4	69.362				18849
4280	SP				33 26.027	0.09	4	70.309	-75 47 03.40	0.25	4	70.309				18849
4281	-30	1901	3.88	K0	33 36.217	0.03	72	70.973	-30 39 49.19	0.04	70	70.956	170	5614	963	30170
4282	-58	401	8.4	K2	33 40.185	0.22	4	70.380	-58 20 33.73	0.12	4	70.380				5839
4283*	-52	534	8.1	K0	4 33 45.762	0.11	5	70.805	-52 48 52.18	0.08	5	70.805				5840
4284	-3	834	4.12	B2	33 49.099	0.02	88	71.057	-3 27 11.72	0.03	86	71.048	169	5617	964	80169
4285	-61	352	8.6	K0	33 53.815	0.06	4	70.415	-61 48 17.62	0.09	4	70.415				5841
4286	-59	362	8.0	K0	33 54.658	0.06	4	70.783	-59 15 13.39	0.12	4	70.783				5842
4287	-38	1650	8.9	A0	34 12.124	0.17	4	69.958	-38 16 29.58	0.19	4	69.958				5843
4288	-51	1184	9.0	K0	4 34 12.883	0.08	4	70.390	-51 04 48.82	0.28	4	70.390				541
4289	-22	861	8.3	G5	34 13.840	0.04	4	70.437	-22 21 22.78	0.11	4	70.437				5844
4290	-14	929	9.0	K5	34 16.475	0.07	3	71.018	-14 45 00.64	0.45	2	70.983				5845
4291	+4	719	8.6	F8	34 25.256	0.15	2	71.549	+4 31 44.39	0.37	2	71.549				5846
4292	+2	738	8.7	K0	34 32.383	0.22	3	72.267	+2 35 06.13	0.16	3	72.267				5847
4293*	-27	1799	7.18	F5	4 34 33.786	0.10	4	70.429	-27 08 52.64	0.05	4	70.429				5848
4294	+0	798	5.32	B5	34 38.899	0.17	6	69.870	+0 53 54.57	0.16	6	69.870	2339	5627	966	32339
4295	-8	896	8.8	K0	34 45.649	0.02	2	71.969	-8 31 34.23	0.11	2	71.969		5630		5849
4296	-43	1495	8.5	K0	34 49.464	0.08	4	70.429	-43 33 03.62	0.10	4	70.429				542
4297	-53	732	8.8	K0	34 50.542	0.16	4	70.852	-53 20 57.98	0.08	4	70.852				5850
4298	+0	800	8.4	G5	4 34 51.761	--	1	71.886	+0 28 29.90	--	1	71.886				5851
4299	-80	122	9.2	K5	34 53.449	0.13	4	69.970	-79 58 26.91	0.07	4	69.970				18850
4299	SP				34 53.279	0.41	5	71.027	-79 58 26.54	0.66	4	70.973				18850
4300	-42	1569	8.5	G5	34 55.548	0.17	4	70.600	-42 25 26.13	0.17	4	70.600				543
4301	-12	948	8.4	M0	34 55.563	0.20	2	71.395	-12 39 35.77	0.10	2	71.395				5852
4302	-46	1465	9.0	K0	4 34 57.407	0.13	5	70.800	-46 22 34.92	0.14	5	70.800				544
4303	+4	723	7.70	F0	34 58.253	0.20	2	71.971	+4 53 00.23	0.15	2	71.971			969	5853
4304	-15	824	8.0	K2	35 00.362	0.15	2	71.982	-15 47 56.54	--	1	71.869				5854
4305	-62	371	8.7	K2	35 02.569	0.09	4	70.504	-62 44 56.02	0.23	4	70.504				5855
4306	-29	1805	8.0	F8	35 02.795	0.08	3	69.325	-29 03 08.95	0.25	3	69.325				5856
4307	-73	269	6.72	K0	4 35 08.636	0.04	6	70.387	-73 18 38.11	0.13	6	70.387	2340	5638	971	32340
4307	SP				35 08.676	0.08	17	71.126	-73 18 37.89	0.19	15	71.020	2340	5638	971	52340
4308	-2	964	7.06	K0	35 12.015	0.04	2	70.480	-2 44 43.81	0.08	2	70.480				5857
4309	+20	785	5.73	B9	35 18.590	0.08	7	71.490	+20 35 09.29	0.14	6	71.390	2341	5644	974	32341
4310	+12	618	4.30	A3	35 21.716	0.13	6	71.182	+12 24 43.32	0.12	6	71.182	2342	5645	975	32342
4311	-80	124	8.4	K0	4 35 21.895	0.17	4	69.996	-80 23 33.74	0.21	4	69.996				18851
4311	SP				35 22.029	0.39	4	70.611	-80 23 34.39	0.42	4	70.611				18851
4312	-49	1389	8.3	K0	35 25.688	0.07	4	70.638	-49 16 16.45	0.35	4	70.638				545
4313	-81	122	7.8	K2	35 28.937	0.12	5	70.069	-81 22 08.01	0.12	4	70.063				18852
4313	SP				35 29.115	0.09	4	71.236	-81 22 07.92	0.16	4	71.236				18852
4314	-67	331	8.99	K0	4 35 37.384	0.11	4	69.713	-67 00 34.63	0.23	4	69.713		5649		18853
4315	-11	920	8.6	K2	35 45.590	0.17	2	70.839	-11 16 00.78	0.03	2	70.839				5858
4316	-52	539	8.37	G0	35 46.229	0.24	4	69.696	-51 56 23.81	0.16	4	69.696		5654		5859
4317	-20	892	7.10	B8	35 49.061	0.15	4	69.924	-20 47 12.47	0.09	4	69.924		5656		5860
4318*	-18	883	7.73	K0	35 50.639	--	1	70.891	-17 54 52.55	--	1	70.891			978	5861
4319*	-14	933	3.98	K0	4 35 53.195	0.02	90	71.918	-14 24 04.51	0.03	89	71.905	172	5657	979	30172
4320	-4	889	8.3	K5	36 01.273	0.03	2	71.327	-4 16 02.85	0.59	2	71.327				5862
4321	-21	933	8.9	G0	36 01.908	0.11	4	70.166	-20 56 24.13	0.22	4	70.166				5863
4322	-55	679	8.9	G0	36 02.365	0.14	4	69.670	-54 57 40.64	0.10	4	69.670				5864
4323	-24	2465	8.7	B8	36 11.175	0.13	4	70.381	-24 45 25.19	0.10	4	70.381				5865
4324	-19	979	7.4	A3	4 36 17.477	0.15	2	70.526	-19 44 20.12	0.02	2	70.526				5866
4325	-34	1785	7.8	G5	36 18.451	0.15	4	69.887	-34 12 30.89	0.09	4	69.887				5867
4326	-45	1617	8.7	K0	36 19.406	0.02	4	69.725	-44 52 48.89	0.21	4	69.725				546
4327	+24	674	6.27	A3	36 19.968	0.19	6	70.555	+25 07 14.79	0.09	6	70.555	2343	5663		32343
4328	-48	1432	9.0	G5	36 20.943	0.09	5	70.096	-48 23 35.05	0.14	4	70.095				547
4329	+7	681	5.55	F0	4 36 23.644	0.09	6	70.350	+7 46 23.57	0.16	6	70.350	2344	5665	981	32344
4330	+15	666	4.85	A3	36 24.804	0.13	6	70.479	+15 49 13.70	0.12	6	70.479	2345	5666	982	32345
4331	-7	864	8.6	K0	36 29.467	0.33	2	70.540	-7 29 33.25	0.02	2	70.540				5868
4332	-31	1954	9.1	G5	36 32.028	0.12	4	70.351	-31 15 05.66	0.19	4	70.351				5869
4333	-6	954	8.8	G5	36 32.455	0.20	3	71.852	-5 52 17.48	0.18	3	71.852				5870

4283 SDS, 8.8m-8.9m, 0°5, 61°.
4293 A 3342, 7.2m-11.0m, 1°3, 66°.

4318 8.5m-8.5m, 0°1, 172°.
4319 7.0m, 1°1, 1°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
4334	+ 1	789	8.4	G5	36 33.611	0.10	2	71.463	+ 2 01 55.00	0.12	2	71.463				5871
4335	-72	312	9.1	G5	36 36.086	0.09	4	70.362	-72 02 41.85	0.15	4	70.362				18854
4336	- 5	981	7.8	K5	36 37.360	0.16	2	71.533	- 4 54 16.35	0.07	2	71.533				5872
4337	-44	1644	7.84	A5	36 38.308	0.13	4	70.140	-44 43 29.35	0.09	4	70.140		5671		548
4338	-87	68	8.5	K0	36 38.677	0.14	4	68.649	-87 02 07.53	0.23	4	68.649				18855
4338 SP																
4339	-19	981	8.7	K0	36 38.448	0.09	4	69.839	-87 02 07.14	0.19	4	69.839				18855
4340	-50	1455	9.3	G5	36 42.292	0.11	2	71.564	-18 59 06.17	0.20	2	71.564				5873
4341	-40	1498	8.9	G5	36 42.626	0.14	4	70.435	-49 54 39.82	0.16	4	70.435				549
4342	-47	1447	9.6	K0	36 43.418	0.12	5	70.679	-40 41 16.53	0.27	5	70.679				550
4343	- 0	743	7.63	K0	36 52.137	0.12	4	70.656	-47 14 22.08	0.17	4	70.656				551
4344	-36	1819	8.8	K2	36 54.731	0.01	2	71.532	- 0 10 52.97	0.06	2	71.532			983	5874
4345	-37	1846	8.5	K2	37 08.482	0.14	5	70.879	-36 16 36.55	0.14	5	70.879				5875
4346	- 3	855	8.5	A0	37 10.248	0.08	4	70.371	-37 25 42.62	0.11	4	70.371				5876
4347	-10	977	8.3	G0	37 13.803	0.20	2	71.970	- 3 28 42.62	0.02	2	71.970				5877
4348	-30	1934	8.4	M1	37 25.394	0.09	2	71.304	-10 47 31.78	0.01	2	71.304				5878
4349*	-21	941	7.18	G5	37 25.939	0.11	3	70.623	-30 33 13.06	0.13	3	70.623				5879
4350	-17	927	8.0	K5	37 27.679	0.09	4	69.879	-21 20 40.72	0.18	4	69.879				5880
4351	+ 0	815	8.7	A0	37 29.328	0.04	2	70.528	-17 03 35.82	0.24	2	70.528				5881
4352	-51	1205	8.8	G5	37 31.293	0.01	2	70.850	+ 0 27 15.12	0.16	2	70.850				5882
4353	-35	1851	8.7	F5	37 38.503	0.18	4	70.309	-51 32 51.13	0.05	4	70.309				552
4354	-24	2488	5.59	K0	37 57.614	0.07	5	70.386	-35 15 47.54	0.09	5	70.386				5883
4355	-72	314	7.6	K2	38 01.812	0.02	155	71.286	-24 34 43.74	0.03	151	71.265	1127	5690	987	81127
4356	-54	689	8.4	K0	38 03.155	0.05	4	69.467	-72 34 29.45	0.22	4	69.467				18856
4357	+28	680	5.68	A0	38 07.211	0.07	4	70.576	-54 16 21.87	0.11	4	70.576				5884
4358	-85	50	8.8	M2	38 11.775	0.11	9	71.513	+28 31 11.31	0.08	9	71.513	1126	5694	989	31126
4358 SP																
4359	-27	1831	8.5	A2	38 13.095	0.07	4	69.879	-84 54 26.59	0.11	4	69.879				18857
4360	-74	298	7.6	K0	38 13.083	0.28	4	71.044	-84 54 26.40	0.28	4	71.044				18857
4361	-35	1857	7.9	K0	38 14.497	0.18	4	69.834	-27 49 51.36	0.29	3	69.532				5885
4362	- 2	982	8.0	G5	38 16.001	0.31	4	69.138	-73 56 29.33	0.08	4	69.138				18858
4363	-57	685	8.0	K2	38 18.185	0.14	5	70.292	-35 06 52.72	0.19	4	70.340				5886
4364	+ 3	640	8.6	K0	38 25.570	0.11	2	70.431	- 2 02 43.65	0.02	2	70.431				5887
4365	-10	983	8.8	G0	38 27.960	0.11	4	69.862	-56 59 07.55	0.21	4	69.862				5888
4366	-39	1583	7.42	K0	38 28.193	0.30	2	70.589	+ 3 25 06.76	0.33	2	70.589				5889
4367	-26	1786	8.2	K0	38 29.332	0.13	3	70.939	-10 09 51.07	0.29	2	71.361				5890
4368	-23	2091	8.58	K0	38 30.995	0.04	4	70.388	-38 54 10.81	0.22	4	70.388		5702		5891
4369	- 7	876	7.6	K0	38 31.592	0.10	4	70.430	-26 10 26.42	0.11	4	70.430				5892
4370	+ 1	798	8.7	G5	38 38.218	0.07	4	69.711	-23 08 52.35	0.13	4	69.711		5703		5893
4371	-42	1587	4.52	F2	38 38.691	0.05	2	71.539	- 6 50 34.44	0.26	2	71.539				5894
4372	-14	942	8.3	K0	38 56.356	0.05	2	71.468	+ 1 48 17.11	0.18	2	71.468				5895
4373	-29	1833	8.4	G0	38 56.657	0.04	35	70.972	-41 57 31.30	0.06	35	70.972	1129	5708	991	31129
4374	-33	1867	9.3	K0	38 57.305	0.11	2	70.560	-14 02 06.31	0.12	2	70.560				5896
4375	-69	286	8.0	K2	39 00.158	0.14	4	70.122	-19 28 42.95	0.13	4	70.122				5897
4376	-32	1932	8.6	K0	39 01.681	0.10	4	70.907	-33 09 38.77	0.19	4	70.907				5898
4377	+22	739	4.33	B5	39 03.626	0.14	4	68.991	-69 33 02.85	0.16	4	68.991				18859
4378*	-39	1590	7.98	F5	39 06.338	0.15	4	70.637	-32 19 18.77	0.05	4	70.637				5899
4379	- 1	700	9.0	A2	39 14.399	0.21	4	72.401	+22 51 45.84	0.22	3	72.506	174	5716	994	30174
4380	- 1	702	6.82	F0	39 21.622	0.13	4	70.464	-39 40 41.17	0.23	4	70.464				5900
4381	-43	1522	9.0	F5	39 36.777	0.01	2	70.446	- 1 45 32.71	0.31	2	70.446				5901
4382	-63	355	9.3	G8	39 49.941	0.16	2	70.480	- 1 01 25.46	0.32	2	70.480				5902
4383	-48	1466	8.2	G5	40 00.061	0.19	4	70.440	-43 06 12.76	0.08	4	70.440				553
4384	+ 4	736	8.6	K0	40 04.350	0.14	4	70.133	-63 05 57.08	0.26	4	70.133				5903
4385	- 9	964	8.5	K0	40 15.942	0.22	4	70.617	-48 15 03.81	0.13	4	70.617				554
4386	-37	1867	5.08	F5	40 16.075	0.22	2	70.864	+ 4 38 51.11	0.54	2	70.864		5738		5904
4387	-71	278	7.8	G5	40 16.136	0.06	2	71.450	- 8 53 57.04	0.05	2	71.450				5905
4388	-77	181	5.88	K0	40 17.353	0.03	70	71.483	-37 14 23.19	0.04	69	71.474	1130	5740	998	31130
4389	-41	1538	9.0	K0	40 32.971	0.18	5	70.617	-71 36 01.27	0.14	5	70.617				18860
4390*	- 7	882	8.6	A2	40 35.901	0.16	6	70.121	-77 45 06.46	0.19	6	70.121	2350	5750		32350
4391	-50	1468	8.2	G5	40 35.855	0.09	7	69.958	-77 45 06.83	0.23	6	69.742	2350	5750		52350
4392	-15	848	7.5	K5	40 40.070	0.08	4	70.148	-41 24 08.48	0.13	4	70.148				555
4393	-55	685	8.38	K0	40 41.693	0.09	3	70.956	- 7 30 17.43	0.24	2	71.386				5906
4394	-39	1601	8.62	K0	40 41.752	0.13	5	70.105	-50 36 45.00	0.38	4	69.860				556
4395	- 1	708	8.7	K5	40 54.220	0.12	2	70.560	-15 42 48.99	0.15	2	70.560				5907
4396	-31	1997	7.35	F0	40 55.292	0.14	4	69.977	-54 53 39.60	0.12	4	69.977		5753		5908
4397	-23	2115	7.6	F2	40 57.846	0.12	4	70.636	-38 57 02.36	0.12	4	70.636		5754		5909
4398	+ 3	652	8.3	K0	40 58.203	0.09	2	70.907	- 1 12 14.43	0.10	2	70.907				5910
4399	-35	1886	8.3	K0	41 00.779	0.07	4	69.102	-31 48 06.52	0.09	4	69.102			5757	5911
4400	- 4	928	8.4	A3	41 10.973	0.06	4	69.667	-23 43 15.37	0.08	4	69.667				5912
4401	-10	993	8.1	A5	41 11.637	0.13	2	70.569	+ 3 23 08.14	0.18	2	70.569				5913
4402	-45	1652	9.5	G5	41 17.548	0.06	4	70.588	-34 56 25.08	0.13	4	70.588				5914
4403	- 7	886	8.9	A0	41 21.103	0.04	2	71.556	- 4 23 29.74	0.55	2	71.556				5915
4404	-61	360	8.4	K0	41 24.014	0.10	2	71.563	-10 46 28.20	0.23	2	71.563				5916
4405	-12	973	8.8	G5	41 25.256	0.12	4	70.968	-45 24 29.51	0.10	4	70.968				557
					41 26.027	0.38	3	72.318	- 7 07 52.22	0.26	3	72.318				5917
					41 26.233	0.10	4	70.388	-61 11 08.68	0.12	4	70.388				5918
					41 27.808	0.12	2	71.962	-12 23 11.92	0.16	2	71.962				5919

4349 A 3375AB, 7.2m-10.8m, 1°4, 101°.
 4378 8.7m-8.7m, 0°2, 337°.

4390 A 3402, 9.3m-9.6m, 0°5, 154°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
4406	-50	1471	5.26	G5	41 29.300	0.10	6	69.046	-50 34' 28.11	0.03	6	69.046	2351	5764	1001	32351
4407	-67	340	8.1	K0	41 30.753	0.22	4	70.069	-66 59 36.68	0.16	4	70.069				18861
4408	-28	1698	8.7	K0	41 34.836	0.26	4	69.155	-28 45 23.66	0.04	4	69.155				5920
4409	-60	333	8.6	K1	41 35.076	0.08	4	70.303	-60 30 00.88	0.34	4	70.303				5921
4410	-3	869	8.1	K0	41 36.305	0.22	2	71.465	-3 15 30.73	0.11	2	71.465		5765		5922
4411	-14	951	8.3	K2	41 38.549	0.24	2	72.387	-14 32 29.74	0.34	2	72.387				5923
4412	-8	929	5.87	B5	41 41.051	0.02	94	71.098	-8 35 43.95	0.03	91	71.055	1131	5768	1003	81131
4413	-68	271	8.19	K0	41 42.040	0.14	4	70.565	-68 42 03.41	0.15	4	70.565		5769		18862
4414	-25	2027	8.3	A3	41 45.226	0.06	4	69.641	-24 52 17.30	0.07	4	69.641				5924
4415	-32	1949	8.2	K2	41 47.315	0.16	4	70.500	-32 20 57.83	0.12	4	70.500				5925
4416	-16	933	8.8	K7	41 51.752	0.04	2	72.007	-16 09 16.66	0.32	2	72.007				5926
4417	-21	960	8.3	G5	41 53.755	0.15	4	69.923	-21 11 55.71	0.14	4	69.923				5927
4418	-41	1546	7.67	K0	41 54.124	0.14	4	70.480	-41 50 44.31	0.06	4	70.480		5772		558
4419	-47	1486	8.0	K0	41 54.789	0.07	5	70.487	-47 18 48.99	0.29	4	70.584				559
4420	-18	906	5.67	A0	41 55.481	0.06	6	69.489	-18 45 29.86	0.19	6	69.489	2352	5773		32352
4421	-49	1427	9.0	G5	41 59.502	0.19	4	70.455	-48 55 35.88	0.13	4	70.455				560
4422	+0	834	7.28	B3	42 07.909	0.17	2	72.067	+0 28 37.15	0.21	2	72.067		5776	1005	5928
4423	-27	1869	7.04	K2	42 14.533	0.15	3	70.451	-27 40 08.91	0.12	3	70.451		5783	1006	5929
4424	-16	937	7.60	G0	42 18.234	--	1	71.121	-16 09 23.66	--	1	71.121			1007	5930
4425	-19	1004	8.5	F0	42 20.193	0.40	2	72.476	-18 59 15.84	0.50	2	72.476				5931
4426	+1	813	9.0	G5	42 20.575	--	1	71.872	+1 30 51.38	--	1	71.872				5932
4427	-27	1871	8.6	K0	42 27.480	0.12	4	70.666	-27 20 13.95	0.09	4	70.666				5933
4428	-36	1862	8.46	K0	42 36.368	0.11	4	69.853	-36 32 42.62	0.22	4	69.853		5790		5934
4429	-56	718	8.3	K2	42 37.360	0.14	4	70.542	-56 27 54.28	0.18	4	70.542				5935
4430	-46	1532	8.0	K0	42 42.511	0.06	4	70.109	-46 21 32.39	0.10	4	70.109				561
4431	+2	760	8.4	K0	42 43.194	0.25	2	71.989	+2 32 45.55	0.26	2	71.989				5936
4432	-20	925	8.3	K2	42 45.179	0.07	5	70.925	-20 21 52.91	0.26	5	70.925				5937
4433	-58	419	8.1	K2	42 48.385	0.07	4	70.755	-58 38 51.23	0.13	4	70.755				5938
4434	-2	1004	8.7	F0	42 49.135	--	1	70.965	-2 45 50.34	--	1	70.965				5939
4435	-3	876	4.18	B5	43 00.023	0.06	15	71.770	-3 20 41.74	0.11	15	71.770	176	5796	1009	30176
4436	-5	1022	8.9	A5	43 04.797	--	1	70.077	-5 38 26.31	--	1	70.077				5940
4437	+2	763	8.8	A0	43 13.186	0.27	3	71.867	+2 56 03.41	0.04	3	71.867				5941
4438	-43	1540	9.0	K0	43 14.802	0.23	4	70.445	-43 06 29.43	0.34	4	70.445				562
4439	+11	646	5.43	A0	43 14.819	0.08	7	71.762	+11 36 56.96	0.07	6	71.708	2353	5802	1011	32353
4440	-33	1906	8.1	F8	43 15.064	0.13	4	69.994	-33 07 19.19	0.14	4	69.994				5942
4441	-26	1827	8.0	K5	43 15.762	0.05	4	70.377	-26 07 46.13	0.10	4	70.377				5943
4442	-44	1693	8.3	K2	43 17.002	0.04	4	70.442	-44 38 33.65	0.09	4	70.442				563
4443	+4	749	8.0	B9	43 17.765	0.25	2	71.366	+4 16 12.00	0.05	2	71.366			1012	5944
4444	-17	945	8.6	A2	43 20.780	0.26	3	72.318	-17 24 26.24	0.04	2	72.429				5945
4445	-53	749	9.4	G5	43 23.393	0.08	4	70.994	-53 21 05.86	0.08	4	70.994				5946
4446	-83	94	7.32	G5	43 28.310	0.06	4	68.643	-83 35 32.34	0.12	4	68.643		5806		18863
4446 SP					43 28.333	0.09	5	70.660	-83 35 31.71	0.26	4	70.514		5806		18863
4447*	-12	982	7.7	F0	43 30.764	0.05	2	71.316	-12 02 20.93	0.10	2	71.316		5807		5947
4448	-71	282	5.69	B9	43 33.231	0.03	77	71.442	-71 01 21.91	0.04	74	71.475	177	5809	1013	30177
4448 SP					43 33.229	0.07	49	71.426	-71 01 22.43	0.16	45	71.399	177	5809	1013	50177
4449	-59	376	5.35	A3	43 35.762	0.21	6	71.031	-59 49 25.80	0.11	6	71.031	2354	5810	1014	32354
4450	-28	1729	8.1	K0	43 41.232	0.06	4	70.126	-28 44 54.72	0.21	4	70.126				5948
4451	-30	1990	9.0	K2	43 41.320	0.21	4	70.752	-30 45 09.31	0.18	4	70.752				5949
4452	-42	1614	9.3	K0	43 46.422	0.14	4	69.725	-42 03 07.44	0.14	4	69.725				564
4453	-13	969	7.9	A3	43 47.509	0.09	2	70.524	-13 03 53.04	0.18	2	70.524				5950
4454	-10	1006	8.8	K5	43 49.402	0.39	2	70.519	-10 18 42.22	0.38	2	70.519				5951
4455	-39	1624	6.04	K0	44 13.844	0.03	6	70.147	-39 26 45.19	0.07	6	70.147	2355	5821	1018	32355
4456	-52	570	8.8	K5	44 15.698	0.09	4	70.897	-52 04 09.30	0.04	4	70.897				5952
4457	+0	845	8.4	K0	44 19.191	0.12	2	70.502	+0 31 43.62	0.20	2	70.502				5953
4458	-28	1735	5.97	A2	44 25.870	0.03	75	71.459	-28 10 35.77	0.04	75	71.459	1132	5825	1019	31132
4459	-63	364	8.8	K	44 28.100	0.14	4	70.106	-63 23 58.43	0.11	4	70.106				5954
4460	-13	972	8.5	K0	44 29.344	0.07	2	71.321	-13 40 12.51	0.07	2	71.321				5955
4461	-45	1676	9.0	K0	44 29.778	0.13	5	70.276	-45 48 32.69	0.07	4	70.321				565
4462	-63	365	6.32	K0	44 29.819	0.20	6	70.075	-63 19 10.32	0.18	6	70.075	2356	5826	1020	32356
4463	-62	383	8.8	K2	44 30.630	0.12	4	70.595	-62 34 59.92	0.13	4	70.595				5956
4464	-65	377	8.9	G5	44 33.351	0.13	4	70.198	-65 03 57.36	0.04	4	70.198				18864
4465	-74	301	9.3	K0	44 35.724	0.22	5	71.169	-74 45 01.41	0.15	5	71.169				18865
4466	-38	1728	7.5	K0	44 35.837	0.08	4	69.839	-38 12 10.32	0.06	4	69.839				5957
4467	-18	921	7.7	F5	44 37.683	0.22	2	71.338	-18 29 16.20	0.17	2	71.338			1021	5958
4468	-36	1879	7.80	K0	44 38.418	0.09	5	70.017	-35 53 42.93	0.12	5	70.017		5830		5959
4469	-40	1570	9.3	G0	44 38.931	0.10	5	70.515	-40 00 07.63	0.16	5	70.515				566
4470	-50	1494	8.9	G5	44 41.856	0.11	4	69.992	-50 42 35.03	0.19	4	69.992				567
4471*	-21	976	8.7	A5	44 42.392	0.16	4	69.136	-21 46 35.30	0.09	4	69.136				5960
4472	-37	1894	7.75	K5	44 46.769	0.09	4	69.878	-37 32 41.07	0.17	4	69.878		5831		5961
4473	-21	977	7.19	G5	44 48.094	0.12	6	69.183	-21 18 00.22	0.08	6	69.183	2357	5832		32357
4474	-44	1703	8.5	G0	44 56.392	0.10	3	69.603	-44 20 42.65	0.11	3	69.603				568
4475	-29	1874	7.50	K0	45 00.995	0.11	4	70.005	-29 29 45.70	0.05	3	69.760		5836		5962
4476	-51	1253	8.8	G5	45 07.139	0.10	4	69.188	-51 08 43.72	0.33	4	69.188				569
4477	-60	338	8.9	K0	45 25.122	0.14	4	69.890	-59 59 47.22	0.11	4	69.890				5963
4478	-20	934	8.8	K2	45 31.161	0.14	3	69.637	-20 28 52.19	0.05	3	69.637				5964

4447 A 3428AB, 7.7m-11.5m, 1st, 263°;
C 10.2m, 10th, 296°.

4471 9.2m-10.6m, 1st, 243°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
4479	- 6	992	9.0	G0	4 45 39.088	0.08	4	70.139	- 6 29 55.10	0.11	4	70.139				25750
4480	-10	1016	8.2	K0	45 41.121	0.00	2	70.504	-10 40 38.03	0.21	2	70.504				5965
4481	- 0	774	8.4	K5	45 42.496	0.14	2	71.361	- 0 28 40.90	0.13	2	71.361				5966
4482	-59	379	9.0	K0	45 44.039	0.13	5	70.836	-59 18 48.60	0.16	5	70.836				5967
4483	+ 1	821	9.0	A0	45 49.171	0.10	2	71.373	+ 1 22 52.55	0.19	2	71.373				5968
4484	- 9	986	7.2	A0	4 45 50.782	0.19	2	70.513	- 9 35 37.31	0.28	2	70.513				5969
4485	+ 2	773	6.66	G5	45 50.933	0.11	2	71.316	+ 2 37 39.79	0.14	2	71.316		5850		5970
4486	- 2	1021	8.6	F0	45 51.841	0.01	2	71.332	- 1 57 12.25	0.24	2	71.332				5971
4487	-56	729	8.24	K0	45 57.250	0.35	4	70.848	-55 52 03.90	0.20	4	70.848		5852		5972
4488	-38	1744	9.2	F8	46 02.413	0.07	4	69.989	-38 09 09.55	0.14	4	69.989				5973
4489	-19	1014	7.7	K5	4 46 08.347	0.08	2	71.317	-19 49 00.27	0.06	2	71.317				5974
4490	-72	321	8.6	K5	46 10.032	0.05	4	69.974	-72 35 27.81	0.06	4	69.974				18866
4491	-40	1583	9.0	K0	46 11.079	0.20	4	69.689	-40 31 58.71	0.10	4	69.689				570
4492	-88	53	7.82	F5	46 28.153	0.12	4	69.604	-87 54 57.20	0.09	4	69.604		5867		18867
4492 SP					46 27.891	0.10	4	70.431	-87 54 57.58	0.23	4	70.431		5867		18867
4493	-24	2590	8.6	K5	4 46 33.893	0.26	3	68.982	-24 19 07.12	0.10	3	68.982				5975
4494*	- 0	778	9.0	K0	46 35.507	0.08	4	69.890	- 0 03 29.65	0.09	4	69.890				25751
4495	+ 3	684	8.3	K0	46 38.539	0.09	2	70.805	+ 3 11 00.01	--	1	70.894				5976
4496	-17	960	8.2	K5	46 44.965	0.06	2	70.447	-17 12 57.81	0.11	2	70.447				5977
4497	-15	868	7.6	K2	46 58.500	0.30	2	71.478	-15 48 14.88	0.13	2	71.478				5978
4498	-44	1720	6.56	G5	4 47 01.407	0.12	6	69.835	-44 03 59.54	0.08	6	69.835	2360	5874	1027	32360
4499	-22	920	8.1	K0	47 02.111	0.16	4	69.689	-21 58 37.44	0.10	4	69.689				5979
4500	- 8	948	8.4	K2	47 03.959	0.03	2	71.466	- 8 12 10.94	0.37	2	71.466				5980
4501	-23	2183	8.1	K2	47 04.716	0.08	4	70.316	-23 08 50.94	0.04	4	70.316				5981
4502	+ 6	762	3.31	F8	47 08.087	0.03	37	72.120	+ 6 52 32.69	0.06	37	72.120	1134	5875	1028	31134
4503	-47	1524	9.3	G0	4 47 10.444	0.14	4	70.101	-47 34 34.53	0.09	4	70.101				571
4504	-50	1512	7.62	G5	47 13.194	0.06	4	70.113	-49 52 43.87	0.12	4	70.113		5876		572
4505	-57	698	7.46	K2	47 15.056	0.10	4	69.653	-56 54 13.39	0.32	4	69.653		5877		5982
4506	-12	1002	7.6	A0	47 21.478	0.01	2	71.541	-12 07 43.02	0.01	2	71.541				5983
4507	- 2	1032	8.2	F0	47 23.964	0.46	2	71.530	- 2 33 45.61	0.36	2	71.530				5984
4508	-14	970	6.30	F2	4 47 24.367	0.06	6	71.303	-13 51 13.20	0.08	6	71.303	2363	5882	1029	32363
4509	-12	1003	8.6	K5	47 27.753	0.11	2	71.584	-11 49 58.54	0.01	2	71.584				5985
4510	-76	295	8.6	G0	47 28.676	0.08	4	70.035	-76 23 33.54	0.18	4	70.035				18868
4510 SP					47 28.458	0.49	3	70.273	-76 23 33.84	0.21	3	70.273				18868
4511	-81	125	8.2	K0	47 33.035	0.13	4	69.376	-81 35 36.12	0.28	4	69.376				18869
4511 SP					4 47 33.011	0.15	4	70.868	-81 35 35.80	0.19	4	70.868				18869
4512	-41	1586	8.5	K0	47 36.609	0.07	4	70.147	-41 40 20.70	0.09	4	70.147				573
4513	- 5	1050	8.5	K5	47 42.373	0.17	2	72.567	- 5 17 47.27	--	1	73.039				5986
4514	- 4	954	7.3	K0	47 58.447	0.07	2	70.590	- 3 56 58.95	0.46	2	70.590				5987
4515	-31	2052	7.3	K0	48 00.699	0.18	4	69.874	-31 03 20.00	0.13	3	69.585				5988
4516	-13	987	8.1	F0	4 48 03.257	0.34	2	72.465	-13 43 09.71	--	1	71.850				5989
4517	-35	1948	7.58	K0	48 03.452	0.09	4	70.435	-35 11 29.96	0.13	4	70.435		5899		5990
4518	-42	1642	7.89	K2	48 05.211	0.11	4	70.475	-41 56 21.07	0.13	4	70.475		5901		574
4519	- 4	955	8.4	A0	48 08.655	--	1	71.886	- 4 12 20.52	--	1	71.886				5991
4520	-77	188	8.8	F5	48 09.522	0.28	4	70.157	-77 06 30.53	0.29	4	70.157				18870
4520 SP					4 48 09.552	0.21	2	70.145	-77 06 30.56	0.13	2	70.145				18870
4521	+ 0	871	6.62	A2	48 10.397	--	1	71.883	+ 1 03 49.19	--	1	71.883		5905		5992
4522	-30	2029	8.0	K2	48 11.888	0.25	4	70.861	-30 20 42.36	0.25	4	70.861				5993
4523	-36	1908	8.8	K0	48 20.614	0.06	4	71.210	-36 26 26.89	0.11	4	71.210				5994
4524	- 9	1002	8.6	A0	48 20.894	--	1	71.888	- 9 38 02.17	--	1	71.888				5995
4525	-48	1529	8.0	G5	4 48 25.144	0.10	4	70.621	-48 23 46.19	0.06	4	70.621				575
4526	-27	1930	7.60	K0	48 30.709	0.06	3	71.282	-27 11 06.99	0.11	3	71.282		5909		5996
4527	-64	371	8.67	G5	48 31.952	0.18	4	70.629	-64 28 24.78	0.10	4	70.629		5910		18871
4528	+ 5	745	3.78	B3	48 32.423	0.03	50	71.197	+ 5 31 16.39	0.05	50	71.197	179	5911	1033	80179
4529	-19	1023	7.5	K2	48 32.437	--	1	71.962	-18 59 02.68	--	1	71.962				5997
4530	-37	1912	8.5	K0	4 48 35.684	0.11	4	70.786	-37 10 17.17	0.09	4	70.786				5998
4531	-74	307	8.6	K0	48 37.656	0.13	4	70.304	-74 41 54.92	0.14	4	70.304				18872
4532	-46	1574	8.5	K0	48 37.871	0.06	5	71.082	-46 15 46.57	0.05	4	71.328				576
4533	-82	99	7.7	K5	48 49.715	0.12	4	69.667	-82 36 30.60	0.11	4	69.667				18873
4533 SP					48 49.772	0.10	5	70.959	-82 36 30.37	0.55	4	70.887				18873
4534	-11	982	8.6	A0	4 48 52.835	0.11	2	71.970	-11 03 13.73	0.00	2	71.970				5999
4535	-39	1659	9.0	K0	48 56.905	0.14	4	70.450	-39 05 43.83	0.30	4	70.450				6000
4536	-75	285	8.1	K2	48 57.503	0.12	4	69.981	-75 09 40.39	0.14	4	69.981				18874
4536 SP					48 57.530	0.08	4	72.333	-75 09 41.00	0.08	4	72.333				18874
4537	-67	352	7.79	A2	48 59.782	0.15	4	70.665	-67 47 55.47	0.09	4	70.665		5922		18875
4538	-54	721	9.2	K2	4 49 02.335	0.22	4	70.998	-54 17 02.37	0.16	4	70.998				6001
4539	-34	1909	8.8	K5	49 05.220	0.16	4	71.160	-34 05 42.93	0.14	4	71.160				6002
4540	- 3	911	8.5	K0	49 06.737	0.09	2	71.984	- 3 01 59.28	0.06	2	71.984				6003
4541	-14	981	7.8	F5	49 18.412	0.01	2	71.416	-14 40 18.19	0.01	2	71.416				6004
4542	-58	430	8.1	K2	49 19.555	0.10	4	70.460	-58 36 24.77	0.20	4	70.460				6005
4543	-33	1970	9.1	K2	4 49 28.632	0.12	3	70.552	-32 59 07.90	0.15	3	70.552				6006
4544	-52	589	8.43	G5	49 31.977	0.12	4	70.703	-52 42 41.76	0.07	4	70.703		5937		6007
4545	+ 4	768	8.2	K0	49 32.321	0.19	2	70.935	+ 4 36 34.75	0.16	2	70.935				6008
4546	+ 1	835	8.0	K2	49 36.928	0.13	2	70.534	+ 1 25 37.53	0.15	2	70.534		5938	1040	6009
4547	-24	2634	8.7	K2	49 37.218	0.16	4	69.474	-24 27 01.92	0.13	4	69.474				6010

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
4548	-35	1962	5.82	A0	49 38.969	0.20	6	69.989	-34 59 21.13	0.07	6	69.989	2364	5939	1041	32364
4549	+27	701	5.91	F2	49 39.547	0.12	6	70.979	+27 48 55.53	0.24	6	70.979	2365	5940		32365
4550	+14	777	5.19	M0	49 42.065	0.03	51	71.171	+14 10 07.26	0.05	50	71.179	1136	5942	1042	81136
4551	-45	1709	8.7	K0	49 44.447	0.15	3	70.346	-45 07 46.48	0.02	3	70.346				577
4552	-15	880	8.0	K0	49 47.893	0.35	2	71.518	-15 08 07.52	0.10	2	71.518				6011
4553	-48	1543	8.0	K0	49 48.013	0.11	4	70.747	-48 08 44.66	0.14	4	70.747				578
4554	-33	1973	7.7	K0	49 56.639	0.10	4	70.382	-33 21 06.61	0.13	4	70.382				6012
4555	-10	1032	8.1	B9	50 12.979	0.06	3	70.912	-10 34 14.96	0.35	2	71.320				6013
4556	-6	1011	8.5	A2	50 19.348	0.01	2	71.409	-6 26 23.73	0.17	2	71.409				6014
4557	-7	919	8.4	A3	50 19.507	0.12	2	71.428	-7 44 01.00	0.02	2	71.428				6015
4558	-8	966	8.7	A0	50 22.370	0.11	2	71.526	-8 44 15.50	0.08	2	71.526				6016
4559	-5	1068	4.45	F0	50 26.110	0.09	6	70.055	-5 32 04.98	0.08	6	70.055	2366	5954		32366
4560	-21	1000	8.6	A2	50 26.456	0.04	4	70.065	-21 39 20.27	0.15	4	70.065				6017
4561	-1	743	8.4	A	50 32.237	0.13	3	71.858	-1 20 45.51	0.23	3	71.858		5955		6018
4562	-47	1546	7.10	G5	50 36.456	0.04	4	69.708	-46 56 04.49	0.10	4	69.708		5958		579
4563	-55	697	8.7	K2	50 43.552	0.13	4	70.339	-55 41 58.79	0.09	4	70.339				6019
4564	-25	2097	8.1	K2	50 46.166	0.16	4	69.838	-25 25 59.02	0.15	4	69.838				6020
4565	-19	1039	8.6	K2	50 48.806	0.31	2	71.325	-18 54 21.04	0.11	2	71.325				6021
4566	-59	387	8.7	G0	50 51.882	0.12	4	70.238	-59 05 30.62	0.16	4	70.238				6022
4567	-36	1922	8.8	K0	50 53.390	0.07	4	69.674	-36 04 21.04	0.13	4	69.674				6023
4568	-70	321	7.76	M0	51 04.499	0.02	4	70.388	-69 54 50.79	0.25	4	70.388		5967		18876
4569	-21	1005	8.6	K0	51 15.250	0.16	4	69.218	-21 44 35.17	0.06	4	69.218				6024
4570	+2	807	8.6	K0	51 18.936	0.10	3	71.989	+3 00 57.15	0.39	3	71.989				6025
4571	-18	949	8.7	F0	51 19.033	0.11	2	70.563	-17 54 28.57	0.06	2	70.563				6026
4572	-44	1762	8.8	K5	51 32.920	0.08	4	69.685	-44 38 43.47	0.09	4	69.685				580
4573	-68	281	9.0	K0	51 34.323	0.19	4	69.627	-68 31 19.53	0.10	4	69.627				18877
4574	+2	810	3.87	B3	51 38.667	0.02	101	71.790	+2 21 37.25	0.03	98	71.780	180	5978	1046	30180
4575	-1	749	8.6	K2	51 40.273	0.02	2	70.912	-1 48 21.49	0.13	2	70.912				6027
4576	-12	1020	8.2	M3	51 41.027	0.12	2	71.371	-12 32 35.33	0.05	2	71.371				6028
4577	-27	1952	8.2	K0	51 43.211	0.11	4	69.830	-27 46 55.67	0.12	4	69.830				6029
4578	-60	350	8.2	K0	51 46.161	0.09	4	69.716	-60 43 03.71	0.10	4	69.716				6030
4579	-26	1891	8.5	K0	51 47.782	0.20	3	70.777	-26 30 34.56	0.14	3	70.777				6031
4580*	-3	928	6.61	F5	51 57.846	0.15	2	71.384	-3 18 21.32	0.01	2	71.384		5982		6032
4581	+11	675	5.15	A3	52 00.307	0.18	6	69.881	+11 20 46.07	0.07	6	69.881	2368	5983	1047	32368
4582	-57	712	8.7	K0	52 00.818	0.17	4	69.859	-57 16 50.31	0.05	4	69.859				6033
4583	-80	133	8.2	G0	52 05.221	0.11	4	69.395	-80 51 47.93	0.07	4	69.395				18878
4583 SP					52 05.252	0.03	5	71.272	-80 51 48.07	0.17	4	71.279				18878
4584	+7	755	5.54	K0	52 05.390	0.08	7	71.649	+7 41 58.38	0.19	6	71.576	2369	5986	1048	32369
4585	-32	2037	9.7	F8	52 09.158	0.16	4	70.144	-32 04 55.94	0.12	4	70.144				6034
4586	-16	988	8.2	K2	52 12.295	0.09	2	70.474	-16 08 43.39	0.12	2	70.474				6035
4587	-35	1989	7.69	G5	52 15.694	0.07	4	70.136	-35 29 09.43	0.12	4	70.136		5990		6036
4588	-43	1596	8.5	K0	52 20.528	0.16	4	70.356	-43 05 37.89	0.05	4	70.356				581
4589	-61	376	8.21	K0	52 21.294	0.07	4	69.632	-61 27 50.27	0.24	4	69.632		5994		6037
4590	-23	2247	8.3	K2	52 23.648	0.09	4	69.900	-23 35 02.67	0.19	4	69.900				6038
4591	-79	159	8.5	K0	52 24.027	0.07	4	69.897	-79 26 20.41	0.05	4	69.897				18879
4591 SP					52 23.987	0.16	4	70.379	-79 26 20.77	0.37	4	70.379				18879
4592	-20	961	8.9	F2	52 38.620	0.22	4	69.260	-20 28 07.84	0.09	4	69.260				6039
4593	-38	1792	9.0	K2	52 38.798	0.30	5	70.880	-38 47 07.67	0.11	5	70.880				6040
4594	-63	379	8.20	K0	52 44.279	0.13	4	68.941	-63 41 46.88	0.08	4	68.941		6006		6041
4595	-0	802	8.5	B9	52 48.999	0.09	3	70.873	-0 25 54.24	0.02	2	71.261				6042
4596	-29	1946	8.5	K2	52 52.021	0.15	4	69.382	-29 38 25.88	0.03	4	69.382				6043
4597	+0	899	8.8	K5	53 02.638	0.10	2	71.339	+0 21 25.47	0.03	2	71.339				6044
4598	-16	992	5.82	K0	53 03.810	0.10	7	70.978	-16 29 49.13	0.14	6	70.786	2370	6012	1051	32370
4599	-11	1003	8.4	A5	53 13.101	0.19	2	71.328	-11 27 35.77	0.14	2	71.328				6045
4600	-39	1691	6.01	K0	53 14.216	0.07	7	70.910	-39 42 28.09	0.08	7	70.910	2371	6016	1052	32371
4601	-51	1298	8.8	F8	53 18.966	0.05	4	69.694	-51 10 42.03	0.03	4	69.694				582
4602	-66	338	6.27	K5	53 25.496	0.14	6	69.476	-66 45 19.12	0.19	6	69.476	2372	6022		32372
4603	-41	1628	8.0	K5	53 26.980	0.08	4	70.378	-41 08 35.50	0.10	4	70.378				583
4604	-57	714	9.1	K5	53 27.709	0.16	4	69.957	-57 37 47.49	0.17	4	69.957				6046
4605	-35	2000	8.2	K0	53 32.097	0.11	4	70.419	-34 55 20.62	0.11	4	70.419				6047
4606	-4	978	8.0	K2	53 34.770	0.42	2	70.521	-4 58 53.41	0.29	2	70.521				6048
4607	+1	859	7.9	A3	53 34.925	0.17	2	71.308	+1 57 55.91	0.14	2	71.308				6049
4608	-5	1088	8.3	B9	53 37.144	0.12	2	71.351	-5 24 03.27	0.00	2	71.351		6027		6050
4609	-39	1697	8.7	G5	53 39.694	0.06	4	70.600	-39 50 14.71	0.14	4	70.600				6051
4610	-35	2004	8.7	F0	53 40.516	0.18	4	70.620	-35 42 02.95	0.17	4	70.620				6052
4611	-41	1630	8.2	K5	53 41.049	0.09	4	70.612	-40 53 40.86	0.08	4	70.612				584
4612	-50	1557	8.6	K0	53 52.127	0.02	4	69.852	-50 01 25.53	0.13	4	69.852				585
4613	-30	2076	8.8	K5	53 53.711	0.13	4	68.863	-30 23 56.59	0.09	4	68.863				6053
4614	-7	936	8.4	G5	53 59.014	0.07	2	70.499	-7 06 01.51	0.18	2	70.499				6054
4615	-17	994	7.48	G5	53 59.425	0.04	2	70.405	-17 48 50.50	0.01	2	70.405		6033		6055
4616	-54	731	7.40	K0	54 04.738	0.24	4	69.613	-54 30 32.83	0.22	4	69.613		6035		6056
4617	-15	904	7.7	A5	54 10.219	0.07	2	71.371	-15 27 29.84	0.04	2	71.371				6057
4618	+1	864	8.2	M0	54 14.220	0.26	2	71.425	+1 26 36.68	0.18	2	71.425				6058
4619	-67	360	8.5	K2	54 20.449	0.14	4	70.195	-67 21 51.51	0.09	4	70.195				18880
4620	+3	716	8.0	A0	54 21.915	0.21	2	71.384	+3 12 31.97	0.19	2	71.384		6037		6059

4580 7.4m-7.4m, 0°3, 45°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
4621	- 8	984	6.82	A5	54 34.545	0.07	2	70.529	- 8 32' 09.48"	0.08	2	70.529		6042		6060
4622	-12	1031	8.1	K2	54 34.695	0.17	2	70.868	-12 37' 13.62"	0.45	2	70.868				6061
4623	-31	2112	8.9	K0	54 38.963	0.06	3	69.542	-31 47' 03.30"	0.13	3	69.542				6062
4624	-24	2700	8.6	K5	54 44.339	0.12	4	69.407	-24 10' 46.33"	0.24	4	69.407				6063
4625	- 1	762	6.23	F2	54 44.752	0.06	4	71.192	- 1 08' 37.52"	0.15	4	71.192	2373	6043	1056	6064
4626	- 3	945	10.1v	A0	54 44.803	0.31	2	70.356	- 3 40' 40.63"	0.03	2	70.356				25782
4627	-22	959	8.7	K2	54 50.351	0.12	4	69.255	-22 06' 53.50"	0.19	4	69.255				6065
4628	- 9	1032	8.5	K0	54 53.392	0.15	3	71.049	- 9 29' 44.08"	0.22	2	71.525				6066
4629	-52	611	8.6	K2	54 55.351	0.09	4	70.605	-52 37' 28.85"	0.14	4	70.605				6067
4630	-43	1615	7.5	K5	55 01.995	0.16	4	70.103	-43 30' 34.00"	0.06	4	70.103				586
4631	-54	734	9.0	K0	55 02.585	0.30	6	71.168	-53 56' 02.43"	0.10	6	71.168				6068
4632	-33	2019	8.8	K0	55 04.043	0.05	4	70.371	-33 32' 26.16"	0.12	4	70.371				6069
4633	+24	717	5.65	B9	55 05.621	0.06	6	70.505	+24 58' 29.22"	0.11	6	70.505	2374	6048	1058	32374
4634	-37	1964	9.5	G5	55 05.737	0.05	4	70.379	-37 49' 36.40"	0.11	4	70.379				6070
4635	- 5	1102	9.0	F0	55 10.983	0.01	2	71.552	- 5 49' 29.91"	0.19	2	71.552				6071
4636	-46	1624	8.0	K0	55 17.622	0.07	4	70.405	-46 36' 41.32"	0.18	4	70.405				587
4637	- 4	987	8.0	G5	55 19.883	0.07	2	71.350	- 4 43' 51.02"	0.03	2	71.350				6072
4638	-53	772	7.7	K2	55 24.191	0.11	4	70.602	-53 06' 14.61"	0.21	4	70.602				6073
4639*	-51	1313	7.8	K0	55 25.700	0.11	4	70.658	-51 31' 44.32"	0.23	4	70.658				588
4640	-14	1003	5.87	B3	55 27.301	0.13	2	71.429	-14 18' 28.10"	0.35	2	71.429		6055	1059	6074
4641	-11	1016	8.8	K0	55 32.279	0.28	2	71.335	-11 42' 53.83"	0.05	2	71.335				6075
4642	+ 3	730	9.0	A0	55 35.765	0.16	2	71.530	+ 4 03' 30.32"	0.27	2	71.530				6076
4643	+ 0	908	7.8	G5	55 43.073	0.02	2	71.436	+ 0 22' 43.23"	0.06	2	71.436				6077
4644	- 5	1109	9.0	A	55 44.043	0.35	3	72.027	- 5 19' 38.06"	0.11	2	71.992				6078
4645	-25	2130	8.1	K5	55 45.842	0.10	4	69.221	-25 08' 10.68"	0.16	4	69.221				6079
4646	-49	1497	9.0	G5	55 52.151	0.05	4	69.714	-49 02' 57.90"	0.09	4	69.714				589
4647	-33	2027	7.6	K2	55 52.836	0.07	4	70.115	-33 08' 40.36"	0.19	4	70.115				6080
4648	-14	1004	8.6	K0	55 54.106	0.18	2	70.517	-14 18' 43.31"	0.26	2	70.517				6081
4649	-56	755	8.07	G5	55 55.263	0.17	4	70.875	-56 27' 59.50"	0.05	3	70.804		6065		6082
4650	-35	2023	7.69	K0	55 57.453	0.06	4	70.129	-34 58' 05.79"	0.17	4	70.129		6069		6083
4651	-26	1938	8.4	K5	56 09.765	0.28	4	69.851	-26 27' 04.32"	0.12	4	69.851				6084
4652	-42	1697	8.5	K0	56 11.581	0.10	4	69.899	-42 23' 38.50"	0.17	4	69.899				590
4653	-62	400	8.0	K0	56 12.769	0.06	4	70.683	-62 31' 43.10"	0.18	4	70.683				6085
4654	-45	1754	9.0	K2	56 24.406	0.08	4	70.004	-45 13' 25.41"	0.13	4	70.004				591
4655	- 2	1083	7.8	A2	56 34.559	0.16	2	71.316	- 2 12' 40.62"	0.36	2	71.316				6086
4656	-29	1978	7.50	K5	56 35.040	0.17	3	70.774	-28 57' 45.77"	0.15	3	70.774		6077		6087
4657	-20	975	8.8	G0	56 35.141	0.10	4	70.416	-20 37' 19.11"	0.14	4	70.416				6088
4658	-75	290	5.28	K0	56 36.554	0.03	99	71.461	-75 00' 51.27"	0.04	96	71.431	1138	6078	1064	31138
4658 SP					56 36.531	0.09	17	70.985	-75 00' 51.57"	0.15	17	70.985	1138	6078	1064	51138
4659	-27	1991	8.0	A2	56 40.904	0.13	4	69.673	-27 30' 46.98"	0.33	4	69.673				6089
4660	-45	1757	9.2	K0	56 50.197	0.10	4	70.601	-44 54' 13.24"	0.20	4	70.601				592
4661	- 8	998	8.1	K5	56 53.170	0.08	2	70.431	- 7 51' 19.89"	0.33	2	70.431				6090
4662	-41	1652	8.8	K5	56 53.933	0.06	4	70.376	-40 58' 54.78"	0.15	4	70.376				593
4663	-10	1063	8.1	K0	57 03.196	0.02	2	71.275	-10 25' 39.91"	0.14	2	71.275		6087		6091
4664	-70	337	8.7	G5	57 08.244	0.12	4	70.488	-70 51' 29.74"	0.04	4	70.488				18881
4665	-47	1599	9.0	G5	57 21.949	0.10	4	70.131	-47 23' 48.12"	0.15	4	70.131				594
4666	-71	301	7.47	G5	57 23.435	0.08	4	70.093	-71 00' 01.85"	0.08	4	70.093		6095		18882
4667	-10	1066	5.69	K0	57 28.366	0.09	6	69.573	-10 20' 09.10"	0.10	6	69.573	2375	6098		32375
4668	-55	723	8.8	K0	57 31.223	0.07	4	69.922	-55 32' 42.87"	0.10	4	69.922				6092
4669	- 2	1092	8.7	K0	57 31.674	0.19	2	71.289	- 2 50' 43.95"	0.35	2	71.289				6093
4670	-64	394	9.0	K2	57 33.373	0.22	4	70.547	-64 40' 23.63"	0.39	4	70.547				18883
4671	-18	973	8.1	K0	57 33.388	0.19	2	70.473	-18 43' 48.87"	0.09	2	70.473				6094
4672	- 0	818	7.8	F2	57 41.523	0.25	2	70.779	- 0 16' 01.27"	0.13	2	70.779				6095
4673	-16	1018	9.0	A0	57 45.764	0.22	2	70.828	-15 52' 18.94"	0.40	2	70.828				6096
4674	-59	409	7.6	K2	57 46.585	0.11	4	70.000	-59 12' 20.92"	0.17	4	70.000				6097
4675	-50	1585	8.5	K0	57 50.538	0.15	4	69.205	-50 12' 57.70"	0.12	4	69.205				595
4676	-25	2148	7.6	F0	57 54.301	0.03	4	69.403	-25 07' 41.26"	0.12	4	69.403				6098
4677	+ 3	738	8.0	B9	58 02.418	0.14	2	70.448	+ 3 11' 33.30"	0.03	2	70.448		6112		6099
4678	-36	1995	7.94	K0	58 05.609	0.13	6	70.241	-36 41' 51.54"	0.18	5	70.309		6113		6100
4679	+ 4	811	7.10	K0	58 08.248	0.07	2	70.503	+ 4 29' 42.86"	0.19	2	70.503		6114		6101
4680	-66	349	9.3	G5	58 09.572	0.09	4	69.739	-66 20' 03.80"	0.05	4	69.739				18884
4681	-32	2084	9.7	G0	58 09.761	0.16	4	70.308	-32 28' 14.94"	0.13	4	70.308				6102
4682	-78	161	8.3	K0	58 10.787	0.13	4	69.421	-78 42' 29.64"	0.12	4	69.421				18885
4682 SP					58 10.855	0.06	4	70.370	-78 42' 30.03"	0.43	4	70.370				18885
4683	-38	1835	8.9	G5	58 28.406	0.19	4	69.699	-38 04' 02.83"	0.05	4	69.699				6103
4684	-17	1009	8.4	F5	58 30.651	0.09	2	70.478	-17 39' 27.05"	0.25	2	70.478				6104
4685	-35	2052	9.0	K0	58 33.968	0.08	4	70.119	-35 49' 33.44"	0.15	4	70.119				6105
4686	-40	1686	9.5	G5	58 46.921	0.07	4	70.434	-40 09' 54.67"	0.10	4	70.434				596
4687	- 0	826	6.60	A3	58 52.735	0.07	2	71.336	- 0 46' 07.28"	0.23	2	71.336		6135		6106
4688	-48	1598	9.0	K0	58 57.263	0.20	4	70.397	-48 28' 29.28"	0.08	4	70.397				597
4689	+ 2	836	8.6	G5	59 00.973	0.06	2	71.474	+ 2 50' 06.93"	0.06	2	71.474				6107
4690	-13	1050	8.6	K5	59 01.267	0.02	2	71.351	-13 09' 40.76"	0.20	2	71.351				6108
4691	-46	1656	8.8	G0	59 09.839	0.23	4	70.158	-46 43' 42.15"	0.26	4	70.158				598
4692*	-23	2336	7.51	F2	59 12.901	0.36	4	69.389	-23 46' 48.59"	0.11	4	69.389				6109
4693	+ 0	923	6.18	K0	59 15.839	0.07	6	70.489	+ 0 39' 03.31"	0.12	6	70.489	2376	6143		32376

4626 10.1m to 13.2m.

4639 SDS, 8.2m-11.2m, 1°8, 25°.

4692 A 3618, 7.6m-9.8m, 0°7, 334°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
4694	-42	1716	8.0	M0	59 20.989	0.14	4	70.601	-42 04 29.87	0.08	4	70.601				599
4695	-21	1045	8.3	F5	59 22.026	0.05	4	70.366	-21 44 10.92	0.03	4	70.366				6111
4696	+0	924	8.2	F8	59 22.052	0.07	2	70.522	+0 58 40.44	0.01	2	70.522		6146		6110
4697	+1	886	7.4	A	59 25.254	-	1	69.754	+1 32 24.76	-	1	69.754		6148		25799
4698	-31	2152	7.9	K0	59 26.814	0.17	5	70.479	-31 27 55.03	0.12	5	70.479				6112
4699	-30	2146	8.0	K0	59 32.054	0.09	4	70.623	-30 18 20.48	0.11	4	70.623				6113
4700	-22	978	8.6	K0	59 37.340	0.10	4	70.027	-22 05 48.05	0.08	4	70.027				6114
4701	-1	779	8.9	K0	59 43.334	0.04	2	71.503	-1 47 23.17	0.14	2	71.503				6115
4702	-39	1743	8.05	K0	59 45.324	0.09	4	70.632	-38 59 31.20	0.22	4	70.632		6151		6116
4703	-61	399	8.7	G5	59 57.703	0.10	4	69.647	-61 44 14.54	0.18	4	69.647				6117
4704	+21	751	4.70	A5	5 00 06.324	0.04	48	71.121	+21 31 12.39	0.06	47	71.143	184	6158	1072	80184
4705	-26	1975	5.01	K0	00 07.848	0.10	6	69.892	-26 20 42.40	0.10	6	69.892	2377	6160	1073	32377
4706	-49	1528	8.2	K0	00 08.872	0.16	4	70.636	-49 38 53.42	0.14	4	70.636				600
4707	-37	1993	7.5	G0	00 09.307	0.13	5	70.659	-37 02 56.37	0.13	4	70.800				6118
4708	-15	927	8.2	F2	00 16.097	0.03	2	71.510	-15 46 41.21	0.10	2	71.510				6119
4709	-23	2354	8.7	K2	5 00 21.509	0.10	4	70.393	-23 51 15.82	0.14	4	70.393				6120
4710	-31	2163	6.00	K0	00 29.159	0.04	55	71.275	-31 50 32.71	0.04	54	71.260	1139	6169	1074	31139
4711	-73	285	9.3	K0	00 32.599	0.18	4	69.636	-73 09 16.22	0.09	4	69.636				18886
4712	-60	366	9.1	K5	00 39.406	0.13	4	70.157	-60 43 13.16	0.09	4	70.157				6121
4713	+1	891	8.8	K0	00 42.283	0.00	2	72.461	+1 37 47.76	0.05	2	72.461				6122
4714	-58	452	8.46	K2	5 00 46.817	0.11	4	70.418	-58 35 28.80	0.29	4	70.418		6175		6123
4715	-7	961	8.5	K0	00 49.410	0.39	2	72.033	-7 21 50.55	0.19	2	72.033				6124
4716	-31	2168	9.2	G5	00 51.509	0.15	4	70.927	-30 54 21.92	0.20	3	70.989				6125
4717	+2	849	8.6	A3	01 01.775	0.16	2	72.324	+2 29 20.32	0.08	2	72.324				6126
4718	-65	409	9.0	F8	01 02.317	0.10	4	70.722	-65 37 26.22	0.04	4	70.722				18887
4719	-70	350	7.71	F0	5 01 09.881	0.13	4	70.282	-70 41 42.86	0.19	4	70.282		6178		18888
4720	-19	1085	8.6	A0	01 11.325	0.25	2	72.895	-19 34 11.82	0.10	2	72.895				6127
4721	-2	1111	6.85	K0	01 11.951	0.11	2	71.884	-2 36 33.45	0.00	2	71.884		6179		6128
4722	-51	1348	8.4	G5	01 16.304	0.18	5	71.159	-51 31 29.71	0.11	5	71.159				601
4723	-85	61	8.2	G0	01 19.134	0.23	4	69.666	-85 27 06.61	0.20	4	69.666				18889
4723	SP				5 01 19.090	0.03	4	70.478	-85 27 06.23	0.21	4	70.478				18889
4724	-3	992	9.0	G0	01 29.672	0.03	3	69.882	-3 33 56.56	0.08	3	69.882				25809
4725	-68	304	8.2	M1	01 39.587	0.12	4	70.476	-68 05 56.72	0.08	4	70.476				18890
4726	-14	1029	6.90	K2	01 39.636	-	1	72.883	-14 37 29.78	-	1	72.883		6190		6131
4727	+15	732	4.65	B9	01 42.568	0.33	2	69.916	+15 20 09.27	0.08	2	69.916	1140	6191	1076	31140
4728	-55	730	8.9	K0	5 01 42.913	0.11	5	70.485	-55 44 27.23	0.13	5	70.485				6132
4729	-3	993	8.5	G5	01 47.381	0.16	2	71.487	-3 28 23.85	0.25	2	71.487				6133
4730	-47	1648	9.4	G0	01 47.561	0.23	4	70.504	-47 48 49.91	0.37	4	70.504				602
4731	-49	1545	9.0	G5	01 50.813	0.09	4	70.997	-49 42 58.90	0.12	4	70.997				603
4732	-26	1989	8.0	K0	01 52.256	0.10	4	70.368	-25 57 38.51	0.23	4	70.368				6134
4733	-50	1609	7.5	F0	5 01 56.146	0.06	5	70.466	-50 23 27.76	0.19	4	70.310				604
4734	-54	761	8.9	K5	01 56.159	0.43	5	71.393	-54 10 01.79	0.33	4	70.971				6135
4735	-27	2045	8.3	K5	01 56.370	0.02	4	71.185	-27 43 40.98	0.11	4	71.185				6136
4736	-36	2026	9.3	K0	01 59.202	0.08	3	70.277	-36 08 07.58	0.12	3	70.277				6137
4737	-29	2028	8.3	K2	02 01.602	0.14	4	71.435	-29 52 55.11	0.10	4	71.435				6138
4738	-45	1793	8.5	G5	5 02 05.857	0.10	4	70.479	-45 53 16.56	0.10	4	70.479				605
4739	-13	1059	7.4	A3	02 19.119	0.36	2	71.806	-12 59 45.89	0.12	2	71.806				6139
4740	-52	637	8.7	K0	02 20.996	0.09	4	71.012	-52 46 14.62	0.10	4	71.012				6140
4741	-3	998	5.98	B5	02 24.266	0.12	6	72.667	-3 06 26.79	0.13	6	72.667	2378	6206	1079	32378
4742	-18	990	7.5	A3	02 24.441	0.06	2	70.599	-17 57 11.44	0.21	2	70.509				6141
4743	-8	1023	8.6	A0	5 02 35.849	0.01	2	72.028	-8 37 31.25	-	1	71.959				6142
4744	-3	999	8.5	A2	02 36.757	0.03	2	72.011	-3 44 15.38	0.11	2	72.011				6143
4745	-20	1003	7.30	G5	02 39.888	0.10	4	70.681	-20 18 51.05	0.14	3	70.662		6215		6144
4746	-16	1034	8.6	K0	02 41.827	-	1	71.962	-16 04 24.86	-	1	71.962				6145
4747	-68	305	8.3	G5	02 47.389	0.05	5	71.217	-67 54 43.26	0.09	5	71.217				18891
4748	-31	2183	8.8	G5	5 02 49.427	0.13	4	69.942	-31 48 58.41	0.08	4	69.942				6146
4749	-63	405	8.4	K2	02 55.532	0.06	4	69.965	-63 16 27.83	0.21	4	69.965				6147
4750	-64	403	8.6	K5	02 57.238	0.07	4	70.564	-64 36 13.92	0.16	4	70.564				18892
4751	-45	1798	9.3	K2	03 03.752	0.12	4	70.711	-45 00 55.33	0.13	4	70.711				606
4752	-10	1090	8.5	A0	03 06.599	0.01	2	71.993	-9 53 36.93	0.14	2	71.993				6148
4753	-72	343	8.3	K0	5 03 07.831	0.13	5	70.969	-71 54 40.34	0.25	5	70.969				18893
4754	-40	1715	9.0	K2	03 11.887	0.07	5	71.139	-40 10 53.85	0.13	4	71.399				607
4755	-39	1778	7.7	K0	03 12.889	0.09	4	70.407	-39 37 41.39	0.12	4	70.407				6149
4756	+1	896	8.2	A0	03 18.790	0.09	2	71.369	+1 47 08.46	0.31	2	71.369				6150
4757	-22	1000	3.29	K5	03 20.611	0.03	50	71.449	-22 26 14.55	0.04	47	71.429	186	6231	1085	30186
4758	-71	309	5.30	K0	5 03 21.153	0.15	6	70.831	-71 22 58.87	0.28	6	70.831	2380	6232	1086	32380
4758	SP				03 21.119	0.13	19	71.060	-71 22 58.57	0.23	17	70.959	2380	6232	1086	52380
4759	+3	767	7.8	K0	03 27.232	0.04	2	70.545	+3 43 19.30	0.24	2	70.545				6151
4760	-1	800	7.9	G5	03 37.909	0.05	2	70.920	-1 18 36.61	0.45	2	70.920				6152
4761	-49	1562	4.92	K5	03 40.299	0.05	43	71.203	-49 38 41.43	0.05	42	71.206	187	6234	1087	30187
4762	-32	2138	8.8	K0	5 03 52.446	0.03	4	70.345	-32 39 54.73	0.20	4	70.345				6153
4763	-42	1758	8.5	K0	03 54.581	0.15	4	70.414	-42 11 27.36	0.20	4	70.414				608
4764	-54	768	6.14	K5	03 57.625	0.12	6	71.409	-54 28 27.40	0.11	6	71.409	2381	6241	1089	32381
4765	-21	1071	8.4	K0	03 59.874	0.09	4	69.219	-20 57 08.76	0.17	4	69.219				6154
4766	-14	1045	7.0	B9	04 05.478	0.02	2	70.559	-14 45 44.92	0.14	2	70.559				6155

4697 A 3623BC, 7.7m-10.7m, 0°5, 25°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
4767	-33°	2114	9.0	K0	5 04 06.099	0.09	3	70.236	-33° 10' 44.48	0.05	3	70.236				6156
4768	+ 0	945	8.5	G5	04 14.195	0.20	3	72.360	+ 0 36 43.78	0.46	2	72.470				6157
4769	- 4	1042	8.3	K5	04 14.773	0.16	2	70.581	- 4 33 39.20	0.19	2	70.581				6158
4770	-38	1877	8.6	K0	04 19.763	0.15	4	70.574	-38 01 42.84	0.08	4	70.574				6159
4771	-44	1860	7.82	K0	04 24.601	0.14	4	70.915	-44 50 41.32	0.03	4	70.915		6251		609
4772	-14	1046	8.7	A0	5 04 27.040	0.05	2	70.977	-14 30 36.26	0.03	2	70.977				6160
4773	-82	106	5.85	K0	04 28.929	0.02	186	70.983	-82 32 26.57	0.03	184	70.977	917	6254	1091	60917
4773	SP				04 28.934	0.02	178	71.175	-82 32 26.39	0.04	175	71.161	917	6254	1091	70917
4774	-41	1703	8.6	G5	04 30.679	0.17	4	71.440	-41 30 26.67	0.33	4	71.440				610
4775	-35	2106	8.03	F2	04 34.445	0.11	4	70.966	-35 05 33.48	0.08	4	70.966		6257		6161
4776	-48	1635	8.0	K5	5 04 35.711	0.09	4	70.526	-48 44 38.22	0.28	4	70.526				611
4777	-57	735	4.76	F8	04 38.932	0.04	43	70.996	-57 32 23.17	0.05	43	70.996	189	6258	1092	30189
4778	+20	885	5.29	A3	04 50.622	0.08	6	70.239	+20 21 14.40	0.20	6	70.239	2383	6259		32383
4779	- 0	849	8.4	K0	04 52.102	0.01	3	72.376	- 0 51 51.05	0.03	2	72.024				6162
4780	+ 4	840	8.2	A0	04 57.020	--	1	71.888	+ 4 28 37.75	--	1	71.888				6163
4781	+ 2	868	8.0	B9	5 04 58.387	0.08	2	71.345	+ 2 24 16.58	0.64	2	71.345				6164
4782*	-19	1102	6.68	G0	04 59.014	0.12	4	71.681	-19 27 32.39	0.13	4	71.681	2385	6264		6165
4783	- 8	1035	6.88	B8	05 02.458	0.11	2	71.989	- 8 43 04.39	0.19	2	71.989		6266		6166
4784	-12	1075	8.5	A0	05 03.453	--	1	71.899	-11 56 21.87	--	1	71.899				6167
4785	-37	2036	8.2	K0	05 07.556	0.14	4	70.566	-37 15 07.52	0.09	4	70.566				6168
4786	-22	1012	8.5	K2	5 05 11.182	0.06	4	69.836	-22 42 42.91	0.09	4	69.836				6169
4787	-14	1051	7.8	G5	05 18.054	0.12	2	70.528	-14 03 04.49	0.06	2	70.528				6170
4788	-58	459	8.0	K2	05 19.085	0.11	4	70.197	-58 15 52.21	0.18	4	70.197				6171
4789	-10	1101	8.5	A0	05 21.757	--	1	70.894	- 9 55 44.98	--	1	70.894				6172
4790	-37	2038	8.5	K2	05 22.715	0.17	4	70.625	-37 45 54.96	0.06	4	70.625				6173
4791	- 5	1162	2.92	A3	5 05 23.244	0.04	30	71.920	- 5 09 00.39	0.05	30	71.920	188	6274	1097	30188
4792	-19	1103	8.6	K5	05 25.529	0.06	2	70.608	-19 05 58.19	--	1	71.121				6174
4793	-56	782	8.3	M1	05 28.088	0.09	5	70.534	-56 17 47.88	0.12	4	70.463				6175
4794	+ 3	777	7.67	A0	05 28.420	0.23	2	72.462	+ 3 41 04.49	0.05	2	72.462			1098	6176
4795	- 6	1090	8.0	K0	05 37.046	0.29	2	71.589	+ 6 16 57.75	--	1	71.082				6177
4796	-25	2234	8.8	K0	5 05 37.182	0.16	4	69.426	-25 06 47.26	0.19	4	69.426				6178
4797	-29	2069	8.2	K2	05 40.864	0.14	4	70.080	-29 02 29.73	0.07	4	70.080				6179
4798	-61	406	9.1	K0	05 43.160	0.10	5	71.014	-61 39 07.63	0.05	4	70.995				6180
4799	-57	741	9.0	G5	05 46.188	0.18	4	70.560	-57 37 02.03	0.14	4	70.560				6181
4800	-34	2080	9.0	F5	05 48.182	0.10	4	70.154	-34 03 29.37	0.24	3	69.967				6182
4801	-72	344	7.9	K0	5 05 49.204	0.16	4	69.909	-72 29 07.33	0.26	4	69.909				18894
4802	-20	1015	7.34	K0	05 50.417	0.17	4	70.102	-20 11 04.84	0.07	4	70.102		6278		6183
4803	-44	1873	7.10	A0	05 56.848	0.04	39	71.236	-44 53 09.63	0.04	38	71.266	1143	6282	1100	31143
4804	-21	1078	8.75	F2	05 59.006	0.14	4	69.902	-21 32 04.52	0.10	3	69.622		6285		6184
4805	-26	2029	8.20	G5	06 00.015	0.17	4	70.392	-26 51 39.59	0.33	4	70.392		6286		6185
4806	- 3	1023	6.87	F2	5 06 01.579	0.16	2	71.412	- 2 53 16.82	0.15	2	71.412		6287		6186
4807	+ 1	911	8.9	A0	06 02.291	0.01	2	72.080	+ 1 12 46.34	0.18	2	72.080				6187
4808	-60	377	7.92	K0	06 03.069	0.11	4	69.954	-59 56 33.13	0.19	4	69.954		6289		6188
4809	-62	422	8.7	K0	06 05.050	0.10	4	70.688	-62 27 00.37	0.23	4	70.688				6189
4810	-44	1875	8.0	K5	06 08.051	0.14	4	70.101	-44 02 02.29	0.10	4	70.101				612
4811	-66	374	8.6	G5	5 06 13.732	0.14	5	71.131	-66 01 52.90	0.05	5	71.131				18895
4812	-39	1797	8.6	F2	06 14.346	0.12	4	69.978	-39 37 38.67	0.20	4	69.978				6190
4813	-18	1010	8.0	K5	06 18.823	--	1	71.951	-18 10 58.26	--	1	71.951				6191
4814	-17	1031	9.0	F5	06 20.968	--	1	71.976	-17 23 28.95	--	1	71.976				6192
4815	-15	952	7.8	K0	06 22.804	0.13	3	72.089	-15 33 14.62	0.28	2	72.063				6193
4816	- 2	1149	8.5	K0	5 06 24.267	0.07	2	72.503	- 2 35 03.20	0.26	2	72.503				6194
4817	-65	428	7.80	K0	06 27.193	0.10	4	70.848	-65 26 27.37	0.16	4	70.848		6295		18896
4818	- 7	985	8.8	B9	06 32.400	0.20	2	70.970	- 7 13 45.48	0.28	2	70.970				6195
4819*	-13	1075	7.8	G0	06 32.848	0.03	2	72.023	-12 58 45.39	0.18	2	72.023				6196
4820	+ 9	743	5.42	A2	06 34.535	0.07	20	71.510	+ 9 46 00.92	0.05	20	71.510	1142	6300	1102	31142
4821p	+27	732	6.1	A3	5 06 36.604	0.03	87	70.983	+27 58 06.50	0.05	84	70.985	1141	6301	1103	81141
4822	- 8	1040	4.34	B2	06 45.099	0.04	23	71.846	- 8 49 00.42	0.08	22	71.790	190	6304	1104	30190
4823	- 2	1155	6.72	G5	06 58.470	0.13	2	71.345	- 2 11 50.93	0.04	2	71.345		6310		6197
4824	- 4	1059	8.8	K2	07 06.948	0.14	2	70.487	- 3 59 14.67	0.33	2	70.487				6198
4825	-73	286	6.25	A0	07 09.092	0.16	7	70.781	-73 06 08.76	0.16	6	70.556	2388	6313		32388
4825	SP				5 07 09.012	0.08	31	71.361	-73 06 08.65	0.23	29	71.369	2388	6313		52388
4826	-63	420	5.24	M3	07 10.326	0.12	6	69.596	-63 27 45.93	0.10	6	69.596	2389	6314	1107	32389
4827	-28	1988	8.5	K5	07 14.618	0.20	5	70.635	-28 06 32.73	0.21	5	70.635				6199
4828	-23	2466	7.36	K0	07 19.357	0.05	4	69.888	-23 10 50.78	0.21	4	69.888		6317		6200
4829	-35	2138	8.8	K0	07 24.144	0.20	4	70.144	-35 42 03.37	0.19	4	70.144				6201
4830	-62	426	8.9	K0	5 07 25.161	0.12	4	69.913	-62 06 35.40	0.05	4	69.913				6202
4831	+ 2	876	8.6	A0	07 27.881	0.09	3	70.917	+ 2 52 27.38	0.05	2	71.327				6203
4832	- 0	867	6.35	K0	07 30.203	0.13	2	70.503	- 0 37 35.90	0.17	2	70.503		6322		6204
4833	-38	1904	9.2	K5	07 32.721	0.12	4	70.487	-38 16 57.25	0.29	4	70.487				6205
4834	-29	2085	8.5	K5	07 37.310	0.18	4	69.225	-29 16 51.72	0.09	4	69.225				6206
4835	-53	808	8.7	K2	5 07 37.405	0.07	4	68.461	-53 18 02.09	0.11	4	68.461				6207
4836	- 4	1061	7.70	B9	07 40.433	0.02	2	71.315	- 3 54 50.65	0.02	2	71.315		6329		6208
4837	-49	1590	7.34	K0	07 53.994	0.12	4	70.177	-49 02 29.48	0.19	4	70.177		6333		613
4838	-33	2148	7.8	K5	07 54.341	0.17	4	69.905	-33 34 57.28	0.11	4	69.905				6209
4839*	- 7	993	8.2	F8	07 55.734	0.06	2	71.328	- 7 39 14.76	0.11	2	71.328		6334		6210

4782 7.5m-7.5m, 0°1, 38°.
4819 8.1m-10.5m, 1°3, 148°.

4821 A 3730, 8.1m, 11°8, 27°.
4839 A 3748, 9.0m-9.0m, 0°2.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
4840	-21	1090	8.6	K2	5 08 10.877	0.11	4	69.621	-21 50 05.30	0.07	4	69.621				6211
4841f	-35	2144	8.80	G5	08 14.001	0.12	5	69.874	-35 21 44.45	0.08	5	69.874				21004
4842	-20	1022	8.6	K5	08 17.821	0.15	4	69.828	-20 09 15.28	0.18	3	69.523				6212
4843	-11	1090	8.8	A0	08 18.115	0.16	2	71.330	-10 58 31.29	0.10	2	71.330				6213
4844	-45	1833	8.6	K2	08 18.816	0.09	4	70.420	-45 27 44.15	0.04	4	70.420				614
4845	-5	1178	8.5	B9	5 08 19.758	0.10	2	71.308	-5 13 50.18	0.04	2	71.308				6214
4846	-47	1709	9.1	G5	08 40.038	0.12	5	70.836	-47 29 19.73	0.13	4	71.020				615
4847	-26	2045	6.53	K0	08 42.569	0.07	5	70.584	-25 58 16.49	0.27	5	70.584		6346		6215
4848	-2	1165	5.93	F2	08 48.145	0.15	6	70.046	-2 33 03.69	0.14	6	70.046	2390	6348	1112	32390
4849	+15	759	5.36	K0	08 49.094	0.06	6	70.499	+15 59 08.26	0.05	6	70.499	2391	6350		32391
4850	-8	1050	9.3v	F8	5 08 50.589	0.12	4	69.925	-8 37 00.63	0.11	4	69.925				25837
4851	-41	1739	10.0	K0	08 52.976	0.18	4	70.431	-41 05 19.60	0.08	4	70.431				616
4852	+4	856	8.8	K0	08 53.866	0.15	2	70.492	+4 49 37.58	0.03	2	70.492				6216
4853	-15	963	9.0	G5	09 02.962	0.01	2	71.483	-15 47 25.68	0.07	2	71.483				6217
4854	-54	786	8.5	K0	09 04.233	0.14	4	69.363	-54 24 59.41	0.24	4	69.363				6218
4855	-24	2887	7.9	G5	5 09 06.203	0.21	4	69.675	-24 24 33.97	0.11	4	69.675				6219
4856	+4	858	7.5	G0	09 07.365	0.13	2	70.528	+4 20 41.53	0.19	2	70.528		6360		6220
4857	-32	2194	8.6	K5	09 07.624	0.12	4	70.390	-32 40 30.35	0.11	4	70.390				6221
4858	-32	2197	8.5	K0	09 29.514	0.12	4	70.440	-31 58 06.08	0.15	4	70.440				6222
4859	+0	978	8.6	F2	09 31.199	0.23	3	71.030	+0 32 42.98	0.14	2	71.498				6223
4860	-30	2232	7.06	F5	5 09 34.355	0.13	6	70.809	-30 17 06.90	0.17	6	70.809	2392	6368		32392
4861	-60	389	8.5	M0	09 35.026	0.07	4	70.069	-60 29 58.42	0.13	4	70.069				6224
4862	-36	2090	8.2	K2	09 36.016	0.07	4	70.133	-36 32 20.31	0.14	4	70.133				6225
4863	-9	1095	8.5	K0	09 37.287	0.07	2	71.533	-9 59 14.80	0.29	2	71.533				6227
4864	-58	474	8.8	F0	09 37.327	0.12	4	69.953	-58 32 49.07	0.25	4	69.953				6226
4865	-34	2120	8.1	G5	5 09 39.704	0.08	4	70.428	-33 56 24.15	0.10	4	70.428				6228
4866	-44	1913	7.5	K2	09 58.041	0.25	4	70.392	-44 00 22.04	0.17	4	70.392				617
4867	-28	2018	8.6	K0	09 58.906	0.02	4	70.370	-28 16 56.95	0.06	4	70.370				6229
4868	-30	2237	8.9	K0	10 03.154	0.17	3	70.965	-30 31 38.20	0.02	3	70.965				6230
4869	-54	791	8.6	K0	10 05.094	0.19	5	70.298	-53 56 50.77	0.16	5	70.298				6231
4870	-12	1096	8.8	G5	5 10 07.293	0.18	2	71.559	-12 28 43.46	0.34	2	71.559				6232
4871	-42	1810	9.0	K0	10 12.851	0.04	4	70.599	-42 13 02.11	0.16	4	70.599				618
4872	-15	971	7.7	G5	10 19.783	0.02	3	71.573	-15 00 35.49	0.00	2	71.816				6233
4873	-17	1047	8.6	A0	10 19.867	0.08	3	72.665	-17 30 47.44	0.06	3	72.665		6376		6234
4874	-40	1781	9.5	K0	10 23.504	0.12	4	70.718	-40 24 25.96	0.13	4	70.718				619
4875	-19	1120	8.5	K0	5 10 26.231	0.25	2	71.571	-19 25 41.96	0.18	2	71.571				6235
4876	-25	2298	8.9	K0	10 26.376	0.10	4	70.442	-25 26 01.39	0.23	3	70.342				6236
4877	-57	758	8.6	K0	10 34.903	0.05	4	69.727	-57 40 17.68	0.24	4	69.727				6237
4878	-39	1835	8.0	K2	10 36.074	0.15	5	70.358	-39 07 05.55	0.15	4	70.422				6238
4879	-16	1072	3.30	A0p	10 41.091	0.02	145	71.076	-16 15 48.45	0.02	144	71.068	1144	6382	1117	81144
4880	+3	812	8.1	G0	5 10 47.191	0.19	2	71.607	+3 37 44.96	0.27	2	71.607				6239
4881	-69	337	8.7	K0	10 49.439	0.08	5	69.756	-69 22 47.47	0.11	4	69.491				18897
4882	-27	2138	7.3	K0	10 55.690	0.08	4	70.515	-27 13 01.14	0.08	4	70.515				6240
4883	-18	1029	8.4	K0	10 58.355	0.09	2	71.981	-18 01 13.62	0.49	2	71.981				6241
4884	-78	170	8.4	K0	11 00.129	0.09	4	70.104	-78 49 48.28	0.18	4	70.104				18898
4884 SP					5 11 00.122	0.32	4	70.468	-78 49 48.10	0.33	4	70.468				18898
4885	-7	1005	9.2	F8	11 07.486	0.17	4	69.916	-7 23 14.32	0.19	4	69.916				25847
4886	-8	1059	6.16	A0	11 08.924	0.24	2	71.929	-8 12 18.90	0.05	2	71.929		6392	1119	6242
4887	+0	988	6.54	K2	11 12.883	0.10	2	72.509	+0 30 11.61	0.30	2	72.509		6394		6243
4888	-2	1181	8.5	F0	11 14.848	--	1	71.957	-2 50 20.94	--	1	71.957				6244
4889	-1	834	8.7	A5	5 11 17.391	--	1	71.959	-0 56 37.57	--	1	71.959				6245
4890	-13	1094	8.5	K0	11 17.761	0.07	2	71.011	-13 43 05.66	0.16	2	71.011				6246
4891	-20	1036	8.3	K2	11 18.391	0.13	5	71.222	-20 35 13.88	0.03	4	70.758				6247
4892	-17	1054	8.0	F8	11 19.259	--	1	70.905	-17 09 49.53	--	1	70.905				6248
4893	-37	2081	8.9	F5	11 19.579	0.09	4	70.199	-37 28 35.41	0.09	4	70.199				6249
4894	-48	1688	9.7	G5	5 11 29.510	0.22	4	70.668	-48 35 03.34	0.12	4	70.668				620
4895	-10	1129	8.9	K2	11 37.301	0.22	2	72.372	-10 26 06.01	0.16	2	72.372				6250
4896	-14	1074	6.26	F2	11 43.274	0.04	2	70.992	-14 39 49.28	0.06	2	70.992		6400		6251
4897	-31	2287	9.2	K0	11 44.530	0.15	4	70.527	-31 16 22.70	0.08	4	70.527				6252
4898p	-23	2539	7.43	G5	11 49.838	0.10	4	70.461	-23 02 43.63	0.16	4	70.461				6253
4899	-69	340	7.62	K2	5 11 49.872	0.15	4	70.405	-69 36 15.00	0.11	4	70.405		6402		18899
4900	-15	977	8.1	K5	11 55.816	--	1	71.968	-15 42 09.24	--	1	71.968				6254
4901	-21	1107	7.2	A2	11 56.717	0.20	5	70.773	-21 42 24.77	0.15	5	70.773				6255
4902	-76	310	8.7	K0	12 00.086	0.04	5	70.129	-76 11 55.15	0.20	5	70.129				18900
4902 SP					12 00.031	0.13	4	70.298	-76 11 54.78	0.30	4	70.298				18900
4903	-43	1740	8.5	K0	5 12 02.994	0.04	4	70.316	-42 59 57.96	0.18	4	70.316				621
4904	-7	1010	8.7	F5	12 03.404	--	1	71.976	-7 44 34.47	--	1	71.976				6256
4905	-0	890	6.89	M3	12 03.822	0.02	2	72.003	-0 37 08.59	--	1	71.910		6406		6257
4906	+4	877	5.82	K0	12 04.461	0.07	6	71.649	+5 05 59.63	0.15	6	71.649	2394	6407		32394
4907	-8	1063	0.34	B8p	12 07.999	0.06	13	70.902	-8 15 28.69	0.07	12	70.887	194	6410	1120	30194
4908	-46	1740	9.5	K0	5 12 13.278	0.25	4	70.619	-46 34 52.04	0.12	4	70.619				622
4909	-67	395	9.4	K0	12 19.268	0.10	4	70.944	-67 09 08.80	0.22	4	70.944				18901
4910	-34	2137	9.2	K0	12 21.596	0.15	4	70.614	-34 38 40.16	0.30	4	70.614				6258
4911	-32	2223	9.5	G0	12 26.681	0.18	4	70.522	-32 51 05.76	0.20	4	70.522				6259
4912			9.0	--	12 28.665	--	1	72.837	+2 34 59.49	--	1	72.837				25853

4841 SDS, 11.8m, 9°9, 342°.
4850 9.3m to 10.0m.

4898 A 3819AB, 10.7m, 8°6, 12°.

CATALOG OF 23,001 STARS FOR 1950.0

303

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
4913	-5	1203	9.0	K5	5 12 30.112	0.13	2	71.354	-5 46 24.58	0.19	2	71.354				6260
4914	-50	1676	8.9	K2	12 35.993	0.09	4	71.004	-50 41 32.01	0.10	4	71.004				623
4915	-59	446	7.14	K2	12 36.360	0.08	4	70.702	-59 38 33.66	0.08	4	70.702		6416		6262
4916	+1	945	7.9	K0	12 36.383	0.07	2	71.420	+1 30 01.37	0.17	2	71.420				6261
4917	-53	817	7.35	G5	12 36.616	0.13	5	70.827	-53 01 55.29	0.15	5	70.827		6417		6263
4918	-5	1204	9.0	A0	5 12 37.480	0.13	2	71.990	-5 18 29.54	0.07	2	71.990				6264
4919	-77	196	7.65	G5	12 41.930	0.28	4	70.500	-77 16 31.70	0.19	4	70.500		6420		18902
4919	SP				12 41.916	0.34	4	70.898	-77 16 31.96	0.52	4	70.898		6420		18902
4920	-12	1108	8.4	F8	12 43.741	0.10	2	71.371	-12 15 36.42	0.22	2	71.371				6265
4921	-1	837	6.12	F2	12 46.457	0.32	2	71.304	-1 27 53.48	0.14	2	71.304		6425		6266
4922	-3	1050	8.0	F8	5 12 53.933	0.22	2	71.437	-3 25 16.85	0.33	2	71.437				6267
4923	-51	1415	8.5	K5	13 02.010	0.19	5	70.908	-51 24 48.43	0.09	5	70.908				624
4924	-12	1111	8.6	G5	13 03.119	0.09	2	70.472	-12 52 24.82	0.13	2	70.472				6268
4925	-7	1016	8.8	A0	13 11.451	0.09	2	71.447	-6 59 21.64	0.26	2	71.447				6269
4926	-79	172	8.7	K0	13 14.507	0.17	6	70.933	-79 52 47.22	0.08	5	70.891				18903
4926	SP				5 13 14.417	0.18	4	70.476	-79 52 47.68	0.11	4	70.476				18903
4927	-33	2204	8.7	K0	13 15.512	0.10	4	69.983	-33 27 53.58	0.14	4	69.983				6270
4928	+11	756	5.50	A0	13 17.302	0.07	6	70.382	+11 17 12.20	0.23	6	70.382	2395	6436	1123	32395
4929	-36	2133	8.4	K1	13 21.885	0.08	4	70.326	-36 42 22.71	0.16	4	70.326				6271
4930	-29	2143	7.31	K0	13 24.415	0.19	4	69.265	-29 48 51.41	0.10	4	69.265		6439	1124	6272
4931	-47	1749	9.0	F0	5 13 32.260	0.14	4	70.017	-47 15 05.31	0.08	4	70.017				625
4932	-64	431	9.4	G0	13 34.523	0.14	4	70.227	-64 31 29.80	0.13	4	70.227				18904
4933	+1	954	8.0	K0	13 35.698	0.06	2	70.451	+1 42 09.03	0.49	2	70.451				6273
4934	-71	323	8.6	K0	13 36.680	0.23	4	70.554	-71 06 56.75	0.16	4	70.554				18905
4935	-26	2096	8.2	K5	13 38.230	0.09	4	69.687	-26 29 47.52	0.11	4	69.687				6274
4936	-75	300	7.9	K0	5 13 39.195	0.06	4	70.027	-75 25 03.18	0.31	4	70.027				18906
4936	SP				13 39.161	0.14	5	71.464	-75 25 03.29	0.27	4	71.518				18906
4937	-42	1840	9.0	K0	13 39.255	0.14	4	70.406	-42 40 14.32	0.05	4	70.406				626
4938	-16	1089	8.8	F8	13 45.283	0.12	2	70.491	-16 24 26.22	0.08	2	70.491				6275
4939	-67	401	4.78	K0	13 47.472	0.03	88	71.229	-67 14 28.99	0.04	83	71.219	196	6444	1126	30196
4940	+3	832	8.5	A2	5 13 51.707	0.13	3	71.048	+3 09 04.64	0.12	2	71.523		6449		6276
4941	-75	291	9.6	F0	13 51.820	0.15	4	70.510	-73 25 39.95	0.19	4	70.510				18907
4942	-38	1955	8.9	K5	13 52.291	0.09	4	70.405	-38 24 50.96	0.23	4	70.405				6277
4943	-75	301	8.9	K2	14 00.884	0.11	4	70.099	-75 12 03.60	0.12	4	70.099				18908
4943	SP				14 00.871	0.18	4	70.879	-75 12 04.12	0.34	4	70.879				18908
4944	+1	957	6.37	B9	5 14 05.134	0.21	2	71.481	+1 53 36.56	0.12	2	71.481		6451		6278
4945	+4	889	8.9	M0	14 15.286	0.15	2	71.488	+4 36 36.74	0.27	2	71.488				6279
4946	-55	770	8.9	K2	14 16.010	0.11	4	69.642	-55 28 16.47	0.05	4	69.642				6280
4947	-23	2577	8.2	G5	14 19.547	0.09	4	70.370	-23 06 47.31	0.05	4	70.370				6281
4948	-35	2203	8.5	K2	14 24.177	0.03	5	70.324	-35 52 01.13	0.17	4	70.381				6282
4949	-28	2069	7.7	K5	5 14 29.955	0.19	4	69.996	-28 11 32.60	0.05	4	69.996				6283
4950	-56	817	8.6	K2	14 30.545	0.12	4	69.632	-56 13 21.92	0.12	4	69.632				6284
4951	-25	2347	7.6	A0	14 32.705	0.17	4	70.442	-25 23 08.66	0.01	4	70.442				6285
4952	-17	1069	6.48	B3	14 34.774	0.17	2	71.438	-17 11 45.03	0.25	2	71.438		6466		6286
4953	-2	1201	8.5	A2	14 40.177	0.18	2	70.473	-2 00 56.99	0.02	2	70.473				6287
4954	-30	2291	8.9	F8	5 14 41.939	0.11	4	69.716	-30 25 14.54	0.08	4	69.716				6288
4955	-15	996	8.6	G0	14 45.032	0.08	2	70.522	-15 00 32.27	0.09	2	70.522				6289
4956	-40	1810	9.5	G0	15 08.034	0.12	4	70.448	-40 03 44.15	0.11	4	70.448				627
4957	-7	1028	3.68	B5	15 10.586	0.03	85	71.961	-6 53 49.34	0.03	83	71.972	195	6480	1133	30195
4958	-15	1001	6.74	B8	15 19.646	0.07	2	70.515	-15 16 19.47	0.34	2	70.515		6485		6290
4959	-13	1116	5.66	K0	5 15 22.306	0.03	2	71.395	-13 34 19.18	0.26	2	71.395		6487		6291
4960	-0	913	7.8	B9	15 27.306	0.15	2	71.593	-0 05 24.18	0.17	2	71.593				6292
4961	-63	441	7.5	K0	15 28.619	0.10	4	69.342	-63 23 43.13	0.02	4	69.342				6293
4962	-12	1124	8.3	K2	15 30.541	0.10	3	71.687	-12 19 44.03	0.13	2	71.987				6294
4963	-49	1654	7.80	K0	15 30.559	0.23	4	69.966	-49 39 09.47	0.15	4	69.966		6491		628
4964	-19	1135	8.0	K2	5 15 31.067	0.03	2	71.567	-19 31 14.72	0.23	2	71.567				6295
4965	-8	1079	7.9	K5	15 36.720	0.17	2	71.564	-8 16 48.98	0.12	2	71.564				6296
4966	-23	2598	8.6	K2	15 37.039	0.19	4	69.739	-23 13 45.59	0.05	4	69.739				6297
4967	-35	2214	4.91	K0	15 40.933	0.03	75	71.130	-34 56 41.85	0.04	70	71.079	197	6495	1136	30197
4968	+0	1003	8.5	A5	15 48.068	0.18	2	70.944	+0 32 28.18	0.16	2	70.944				6298
4969	-18	1048	8.2	M0	5 15 49.220	0.20	2	70.458	-18 39 52.22	0.11	2	70.458				6299
4970	-17	1078	8.6	K0	15 53.839	0.07	3	71.105	-17 25 10.03	0.01	2	71.610				6300
4971*	-38	1971	9.1	G0	16 05.955	0.08	4	70.873	-38 12 14.52	0.15	4	70.873				6301
4972	-62	450	8.1	K0	16 06.964	0.14	4	69.764	-62 45 12.36	0.09	4	69.764				6302
4973	-30	2306	8.3	K2	16 07.610	0.11	4	69.664	-30 03 15.95	0.08	4	69.664				6303
4974	-35	2220	8.9	F8	5 16 09.652	0.08	4	70.649	-35 25 07.46	0.12	4	70.649				6304
4975	+21	816	5.14	K0	16 16.201	0.11	6	71.418	+22 02 45.94	0.06	6	71.418	2398	6506	1137	32398
4976	-21	1129	8.5	K2	16 17.604	0.03	4	70.414	-20 55 45.91	0.10	4	70.414				6305
4977	-53	829	9.2	K0	16 18.657	0.27	5	70.431	-53 47 18.79	0.12	5	70.431				6306
4978	-72	358	8.5	K0	16 22.337	0.11	4	69.443	-72 27 05.31	0.12	4	69.443				18909
4979	-43	1777	8.5	F0	5 16 33.117	0.23	4	70.467	-43 51 22.35	0.11	4	70.467				629
4980	-54	809	6.96	K0	16 41.987	0.13	5	70.256	-54 31 27.19	0.11	4	70.116		6514		6307
4981*	-22	1072	8.4	F8	16 53.835	0.13	4	69.665	-22 02 05.76	0.07	4	69.665				6308
4982	-4	1102	8.5	A0	17 02.295	0.10	2	70.555	-4 23 29.69	0.13	2	70.555				6309
4983	-24	2993	8.5	K2	17 02.975	0.20	4	70.703	-24 13 01.43	0.08	4	70.703				6310

4971 SDS, 9.9m-9.9m, 1"1, 320°.

4981 8.8m-9.1m, 0"3, 306°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
4984	-45°	1911	9.6	M0	5 17 04.878	0.10	4	70.936	-45° 08' 30.10	0.11	4	70.936				630
4985	-1	860	8.5	A0	17 06.336	--	1	71.834	-1 09 31.23	--	1	71.834				6311
4986*	-55	787	8.9	K2	17 07.084	0.04	4	70.228	-55 45 31.26	0.07	4	70.228				6312
4987	-57	783	8.7	K5	17 07.653	0.24	4	70.446	-57 29 47.70	0.18	4	70.446				6313
4988	-9	1125	8.6	F0	17 08.415	--	1	71.845	-9 30 12.93	--	1	71.845				6314
4989	-9	1126	8.2	A0	5 17 11.905	0.16	2	72.069	-9 45 04.28	0.10	2	72.069				6315
4990	-81	134	6.48	G5	17 13.940	0.13	6	69.120	-81 35 48.15	0.09	6	69.120	3976	6530		33976
4990	SP				17 13.885	0.05	6	68.753	-81 35 47.69	0.28	6	68.753	3976	6530		53976
4991	-5	1221	7.3	A0	17 14.161	0.08	3	71.673	-4 55 39.10	0.08	2	71.966				6316
4992	-37	2133	9.0	K5	17 14.503	0.09	4	70.473	-37 23 26.86	0.18	4	70.473				6317
4993	-50	1717	8.5	K2	5 17 15.481	0.15	5	71.161	-50 46 44.53	0.22	5	71.161				631
4994	-31	2348	9.0	K0	17 16.042	0.22	3	71.320	-31 35 06.74	0.07	3	71.320				6318
4995	-13	1127	4.29	B1	17 16.196	0.05	17	71.937	-13 13 37.27	0.10	16	72.001	1146	6531	1141	31146
4996	-11	1134	8.2	B8	17 20.038	0.10	2	70.597	-11 05 06.41	0.02	2	70.597				6319
4997	-27	2204	5.75	A0	17 24.004	0.02	93	71.237	-27 25 08.76	0.03	86	71.239	198	6535	1142	80198
4998	-41	1812	8.5	G5	5 17 35.996	0.28	4	70.512	-41 37 46.74	0.10	4	70.512				632
4999	-36	2173	8.1	G5	17 40.673	0.10	4	70.614	-36 47 42.77	0.05	4	70.614				6320
5000	-51	1452	7.56	K0	17 44.153	0.04	4	70.697	-51 37 47.82	0.07	4	70.697		6539		633
5001	-68	347	7.88	K0	17 49.631	0.22	4	70.717	-68 38 39.23	0.14	4	70.717		6542		18910
5002	-11	1138	8.4	K2	17 53.712	0.02	2	70.405	-11 07 05.15	0.01	2	70.405				6321
5003	-65	452	9.3	M0	5 18 05.891	0.20	5	71.447	-65 34 51.64	0.07	4	71.039				18911
5004	-50	1723	5.52	F8	18 08.446	0.03	81	71.031	-50 39 27.66	0.03	81	71.031	199	6553	1144	30199
5005	-5	1228	8.3	G5	18 10.499	0.08	2	70.491	-5 52 17.25	0.08	2	70.491				6322
5006	+2	926	6.74	A5	18 15.159	0.17	3	70.952	+2 52 47.01	0.10	2	71.380		6555		6323
5007	-83	106	8.9	G0	18 20.330	0.13	4	68.820	-83 13 31.63	0.10	4	68.820				18912
5007	SP				5 18 20.298	0.09	4	69.808	-83 13 31.49	0.30	4	69.808				18912
5008	+4	905	8.5	B8	18 24.389	0.01	2	71.560	+4 25 45.80	0.17	2	71.560		6562		6324
5009	-60	409	9.1	K0	18 25.315	0.10	4	70.434	-60 04 23.18	0.09	4	70.434				6325
5010	-34	2197	9.3	G0	18 27.840	0.09	4	70.691	-34 32 08.01	0.15	4	70.691				6326
5011	-22	1082	8.6	K2	18 28.329	0.09	4	69.211	-22 27 56.97	0.11	4	69.211				6327
5012*	-32	2276	8.5	G5	5 18 29.739	0.13	4	70.353	-32 40 09.02	0.20	4	70.353				6328
5013	-33	2266	9.2	F5	18 32.957	0.07	4	70.741	-33 26 51.76	0.07	4	70.741				6329
5014	-3	1070	8.5	K0	18 41.092	0.22	2	70.835	-2 54 30.02	0.19	2	70.835				6330
5015	-27	2212	8.7	G5	18 41.559	0.15	4	69.248	-27 51 12.36	0.11	4	69.248				6331
5016	-29	2192	7.14	A0	18 47.574	0.08	4	70.160	-29 15 17.76	0.08	3	69.967		6570		6332
5017	-25	2380	8.7	K5	5 18 49.272	0.12	4	69.718	-25 35 13.96	0.04	4	69.718				6333
5018	-46	1787	8.0	K2	18 57.098	0.11	4	70.439	-46 36 45.31	0.10	4	70.439				634
5019	+8	933	5.71	B2	19 00.113	0.14	6	70.008	+8 22 50.42	0.15	6	70.008	2401	6574	1147	32401
5020	-15	1018	8.2	A5	19 02.327	0.22	2	70.828	-15 11 57.46	0.26	2	70.828				6334
5021	-48	1759	8.9	K2	19 06.480	0.07	4	70.223	-48 04 37.27	0.06	4	70.223				635
5022	-0	930	4.65	B3	5 19 12.469	0.02	100	71.705	-0 25 48.98	0.04	96	71.701	1147	6579	1148	31147
5023	-43	1805	8.57	K5	19 26.246	0.17	4	69.987	-43 32 10.44	0.16	4	69.987		6585		636
5024	+3	864	7.7	K5	19 27.697	0.14	2	70.507	+3 31 27.10	0.42	2	70.507		6586		6335
5025	-3	1075	6.96	B8	19 27.973	0.18	2	70.511	-3 00 40.40	0.19	2	70.511		6587	1149	6336
5026	-61	445	7.6	K0	19 34.358	0.09	4	69.195	-61 13 01.77	0.08	4	69.195				6337
5027	-14	1107	8.5	G5	5 19 36.069	0.05	2	70.569	-13 55 32.56	0.21	2	70.569				6338
5028	-63	449	8.4	G5	19 40.684	0.10	4	70.216	-63 07 17.34	0.18	4	70.216				6339
5029	-17	1098	6.94	K0	19 42.475	0.01	2	71.369	-17 39 03.91	0.02	2	71.369		6594		6340
5030	-74	323	7.83	K0	19 42.586	0.21	5	70.666	-74 44 52.57	0.13	5	70.666		6595	1150	18913
5031	-12	1142	8.5	G5	19 46.540	0.04	2	71.402	-12 10 27.49	0.13	2	71.402				6341
5032	-66	397	8.5	K0	5 19 47.137	0.15	5	70.158	-66 29 30.51	0.14	4	69.994				18914
5033	-39	1922	7.40	K0	19 48.708	0.09	5	70.315	-39 32 44.92	0.09	4	70.369		6598		6342
5034	-40	1854	8.2	K0	19 49.331	0.10	4	70.007	-40 48 42.86	0.12	4	70.007				637
5035	-28	2124	8.6	F8	19 58.326	0.08	4	69.414	-28 11 26.57	0.05	4	69.414				6343
5036	-16	1117	8.8	A2	19 59.843	0.03	2	70.518	-16 03 39.69	0.22	2	70.518				6344
5037	-38	2001	7.92	K0	5 20 17.067	0.05	4	70.366	-38 32 09.01	0.28	4	70.366		6611	1152	6345
5038	-56	836	8.50	K0	20 18.047	0.06	5	70.479	-56 33 59.20	0.06	5	70.479		6612		6346
5039	-47	1800	8.8	M0	20 22.487	0.05	4	70.153	-47 41 36.77	0.06	4	70.153				638
5040	-10	1169	8.6	K0	20 22.700	0.12	2	70.528	-10 36 45.99	0.17	2	70.528				6347
5041	-58	493	8.58	K5	20 26.314	0.14	4	70.042	-58 09 15.12	0.09	4	70.042		6614		6348
5042	+0	1033	8.6	B9	5 20 27.732	0.01	2	71.477	+0 23 34.47	0.22	2	71.477				6349
5043	-8	1103	8.6	A0	20 28.317	0.11	3	70.928	-8 08 00.71	0.03	2	71.343				6350
5044	-25	2404	8.3	F5	20 30.469	0.27	4	68.899	-25 37 48.16	0.13	4	68.899				6351
5045	+1	992	7.59	K2	20 30.891	0.00	2	71.450	+1 14 36.14	0.02	2	71.450		6617		6352
5046	-35	2254	8.4	F2	20 31.464	0.05	4	70.380	-35 20 38.55	0.20	4	70.380				6353
5047	-23	2675	8.1	K0	5 20 35.881	0.09	4	69.843	-23 18 19.56	0.17	4	69.843				6354
5048	-64	439	8.03	G5	20 40.748	0.16	4	70.422	-64 07 21.29	0.23	4	70.422		6621		18915
5049	-52	708	8.9	K0	20 41.627	0.15	4	70.427	-52 47 26.73	0.05	4	70.427				6355
5050	-46	1804	9.5	G5	20 44.781	0.17	4	70.160	-46 19 35.82	0.17	4	70.160				639
5051	-50	1748	8.68	K0	20 52.556	0.07	4	69.464	-50 09 20.51	0.17	4	69.464		6627		640
5052	-1	879	8.2	A0	5 20 55.569	0.07	2	71.439	-1 02 53.81	0.50	2	71.439				6356
5053	-14	1117	7.91	K0	21 02.609	0.04	2	71.480	-14 52 44.08	0.20	2	71.480			1153	6357
5054	-68	360	8.5	G5	21 05.469	0.10	4	70.468	-68 01 53.25	0.24	4	70.468				18916
5055	-26	2185	6.44	F5	21 11.387	0.19	3	69.893	-26 45 04.94	0.23	3	69.893		6634	1155	6358
5056	-7	1061	8.8	K5	21 11.614	0.08	2	71.326	-6 56 36.18	0.18	2	71.326				6359

4986 SDS, 9.1m-11.3m, 1°9, 207°.

5012 8.7m-10.6m, 1°3, 183°.

CATALOG OF 23,001 STARS FOR 1950.0

305

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
5057	-45	1946	8.5	K2	5 21 12.400	0.09	4	69.707	-45 27 26.06	0.12	4	69.707				641
5058	+ 2	941	8.5	F8	21 17.386	0.15	2	71.343	+ 2 13 48.77	0.05	2	71.343				6360
5059	- 4	1113	8.4	A5	21 22.345	0.09	2	71.330	- 4 36 46.99	0.01	2	71.330				6361
5060	-56	840	6.20	B9	21 26.720	0.11	6	68.891	-56 10 50.54	0.22	6	68.891	2403	6644	1158	32403
5061	-36	2209	8.3	K2	21 30.343	0.05	4	69.955	-36 25 02.91	0.10	4	69.955				6362
5062	-22	1099	7.6	A3	5 21 31.499	0.12	4	69.403	-22 21 11.24	0.13	4	69.403				6363
5063	-20	1077	7.4	K2	21 43.789	0.16	4	69.643	-20 46 22.08	0.06	3	69.277				6364
5064	-39	1940	5.81	M0	21 44.922	0.11	6	69.472	-39 43 25.66	0.15	6	69.472	2405	6648	1159	32405
5065	-26	2191	8.5	K7	21 47.297	0.08	4	69.899	-26 51 20.32	0.05	4	69.899				6365
5066	-72	369	8.6	K5	21 55.682	0.07	4	68.876	-72 08 27.71	0.13	4	68.876				18917
5067	-32	2313	8.5	K0	5 21 59.282	0.07	5	70.354	-32 11 45.25	0.10	4	70.418				6366
5068	-59	463	8.30	G5	22 07.972	0.09	4	69.162	-59 40 48.92	0.16	4	69.162		6659		6368
5069	-21	1159	8.8	K0	22 08.067	0.02	4	69.841	-21 09 58.82	0.05	4	69.841				6367
5070	+ 1	1005	4.73	B3p	22 08.990	0.07	6	69.958	+ 1 48 08.10	0.08	6	69.958	2406	6660	1161	32406
5071	-49	1701	7.92	K0	22 09.923	0.04	4	69.977	-49 25 11.86	0.10	4	69.977		6662		642
5072	-33	2307	8.8	K2	5 22 12.364	0.05	4	70.004	-33 47 16.83	0.11	4	70.004				6369
5073	-24	3060	8.7	F2	22 13.166	0.18	4	69.723	-24 44 00.86	0.11	4	69.723				6370
5074	+15	809	8.9	F0	22 13.745	0.11	4	70.558	+15 19 05.43	0.29	4	70.558				25889
5075	-17	1117	5.68	A0	22 14.853	0.09	2	70.500	-17 01 11.86	0.01	2	70.500		6666		6371
5076	-35	2275	8.3	K0	22 21.750	0.19	4	69.713	-35 49 43.91	0.16	4	69.713				6372
5077	+ 6	919	1.70	B2	5 22 26.824	0.02	88	71.994	+ 6 18 21.49	0.03	85	71.992	201	6668	1162	30201
5078	-51	1479	9.2	K5	22 27.248	0.09	4	69.843	-51 34 51.31	0.20	4	69.843				643
5079	-81	141	8.5	G0	22 27.306	0.13	5	69.215	-81 00 47.22	0.11	5	69.215				18918
5079 SP					22 27.430	0.02	3	69.800	-81 00 46.10	0.53	2	69.995				18918
5080	-17	1120	8.6	A7	22 36.286	0.16	2	70.562	-17 09 34.53	0.01	2	70.562				6373
5081	-29	2228	8.8	G5	5 22 39.614	0.15	5	71.272	-29 01 24.50	0.16	5	71.272				6374
5082	-55	801	9.2	K0	22 40.795	0.15	4	70.155	-55 38 08.42	0.13	4	70.155				6375
5083	-62	465	7.7	K2	22 43.773	0.05	5	70.105	-62 16 32.56	0.11	4	69.928				6376
5084	-43	1830	7.65	K5	22 45.250	0.17	4	70.399	-43 39 10.84	0.13	4	70.399		6673		644
5085p	-19	1166	6.94	A0	22 49.506	0.17	2	70.526	-19 25 02.88	0.36	2	70.526		6674		6377
5086	-39	1951	8.9	K2	5 22 49.718	0.05	4	70.150	-39 00 47.23	0.34	4	70.150				6378
5087	- 7	1071	8.1	K5	22 54.661	0.25	2	71.518	- 7 44 23.86	0.20	2	71.518				6379
5088	-18	1085	8.6	K2	22 54.949	0.13	2	70.903	-18 45 49.72	0.14	2	70.903				6380
5089	-76	318	7.98	A5	23 02.711	0.07	4	69.902	-75 57 47.09	0.07	4	69.902		6678		18919
5089 SP					23 02.806	0.50	5	70.721	-75 57 47.00	0.68	4	70.590		6678		18919
5090	- 1	889	7.5	B3	5 23 04.485	--	1	71.080	- 1 32 03.88	--	1	71.080				6381
5091	-88	58	7.43	M0	23 06.017	0.14	4	69.377	-88 20 11.05	0.17	4	69.377		6680		18920
5091 SP					23 05.611	0.13	5	70.806	-88 20 10.88	0.09	4	70.696		6680		18920
5092	- 5	1245	8.5	K0	23 07.542	0.10	2	71.563	- 5 12 00.45	0.16	2	71.563				6382
5093	+28	795	1.78	B8	23 07.768	0.36	2	71.368	+28 33 57.93	0.23	2	71.368	202	6681	1163	30202
5094	-31	2439	8.7	G5	5 23 11.149	0.10	4	70.037	-31 31 41.16	0.12	4	70.037				6383
5095	-42	1930	8.5	K0	23 15.151	0.08	4	70.184	-42 29 00.99	0.14	4	70.184				645
5096	- 9	1150	7.7	K0	23 18.164	0.04	2	71.563	- 9 35 43.67	0.20	2	71.563				6384
5097	-30	2375	9.0	K0	23 26.136	0.10	4	70.010	-30 39 27.13	0.13	4	70.010				6385
5098	-44	2036	5.90	K0	23 26.140	0.08	7	71.425	-44 16 08.82	0.17	6	71.315	2407	6688	1165	32407
5099	- 6	1175	7.7	F8	5 23 27.100	0.19	2	71.969	- 6 24 19.00	0.20	2	71.969				6386
5100	-34	2241	7.5	G5	23 31.344	0.07	4	70.384	-34 53 26.08	0.12	4	70.384				6387
5101	-10	1186	7.2	B9	23 43.043	0.17	2	71.579	-10 48 01.33	0.23	2	71.579				6388
5102	+ 3	898	8.1	F5	23 44.769	--	1	71.869	+ 3 48 50.36	--	1	71.869				6389
5103	-73	296	6.88	K0	23 45.986	0.13	4	69.657	-73 50 46.11	0.03	4	69.657		6699		18921
5104	-13	1149	7.6	K0	5 23 46.089	0.02	3	71.967	-12 56 49.98	0.01	2	71.902		6698		6390
5105	- 3	1097	8.5	A0	23 46.112	0.12	2	72.024	- 3 07 06.24	0.14	2	72.024				6391
5106	-22	1106	8.4	K0	23 51.961	0.28	4	69.617	-22 47 00.85	0.13	4	69.617				6392
5107	-41	1867	8.5	K0	23 52.991	0.09	4	70.604	-41 22 53.44	0.07	4	70.604				646
5108	-77	203	9.4	K5	23 54.145	0.15	4	70.001	-77 44 25.22	0.04	4	70.001				18922
5108 SP					5 23 54.201	0.31	4	70.879	-77 44 25.88	0.21	4	70.879				18922
5109	-49	1709	9.2	K0	24 00.688	0.10	4	70.990	-48 57 46.63	0.16	4	70.990				647
5110	-79	178	8.6	K2	24 02.236	0.13	4	69.968	-79 43 35.20	0.17	4	69.968				18923
5110 SP					24 02.199	0.10	4	70.500	-79 43 34.88	0.26	4	70.500				18923
5111	-52	722	7.77	K2	24 06.580	0.14	4	70.124	-52 43 11.35	0.12	4	70.124		6708		6393
5112	+ 1	1015	8.8	B9	5 24 12.001	0.10	2	72.479	+ 2 01 35.62	0.04	2	72.479				6394
5113	-57	813	9.2	K0	24 12.071	0.09	4	70.518	-57 16 41.10	0.12	4	70.518				6395
5114	+17	928	5.31	B3	24 14.942	0.06	10	71.321	+17 55 15.23	0.10	10	71.321	1148	6714	1167	31148
5115f	-20	1085	7.7	A3	24 15.356	0.13	4	69.914	-20 45 26.41	0.15	4	69.914				6396
5116	-13	1152	7.9	A0	24 21.805	0.04	2	72.524	-13 54 04.92	0.32	2	72.524				6397
5117	- 4	1132	8.6	K2	5 24 29.756	0.07	2	72.550	- 4 20 26.15	0.29	2	72.550				6398
5118	-24	3087	8.2	K0	24 37.649	0.11	4	69.944	-24 24 45.93	0.08	4	69.944				6399
5119	-12	1169	6.37	F5	24 44.925	0.07	3	72.227	-11 56 30.40	0.14	3	72.227	2409	6726	1168	6400
5120	-76	319	8.4	G5	24 47.684	0.11	5	70.724	-76 39 30.81	0.37	4	70.881				18924
5120 SP					24 47.589	0.16	3	71.199	-76 39 29.96	0.64	3	71.199				18924
5121	-37	2207	9.0	K0	5 24 56.189	0.20	4	70.406	-37 20 59.34	0.26	4	70.406				6401
5122	+ 4	935	8.8	K0	24 58.684	0.28	2	71.015	+ 4 47 40.82	0.10	2	71.015				6402
5123	-56	849	7.86	K0	25 00.447	0.06	4	70.188	-56 38 36.95	0.15	4	70.188		6731		6403
5124	- 0	958	8.6	B9	25 09.831	--	1	71.957	- 0 17 59.03	--	1	71.957				6404
5125	-68	369	8.2	G0	25 13.036	0.07	4	70.039	-68 02 42.38	0.09	4	70.039				18925

5085 10.9m, 27.6, 75°.

5115 SDS, 10.5m, 37.9, 231°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*	
5126	-15	1047	8.5	K2	5	25	16.943	--	1	71.962	-15	17	22.18	--	1	71.962			6405	
5127	-8	1128	8.2	A5		25	18.764	--	1	72.791	-8	22	04.02	--	1	72.791			6406	
5128	-28	2182	8.5	K2		25	24.725	0.20	4	70.304	-27	56	55.03	0.04	4	70.304			6407	
5129	-41	1884	5.85	A2		25	28.946	0.05	20	70.612	-40	59	06.61	0.07	20	70.612	1149	6748	1172	31149
5130	-54	834	8.5	F8		25	34.585	0.19	4	70.982	-54	02	38.58	0.23	4	70.982				6408
5131	-59	472	5.06	G5	5	25	35.258	0.06	6	71.081	-58	57	14.47	0.15	6	71.081	2410	6749		32410
5132	-1	906	8.6	A0		25	38.786	--	1	71.938	-1	48	42.83	--	1	71.938				6409
5133	-25	2452	7.43	A2		25	42.654	0.10	7	71.365	-25	40	37.71	0.11	6	71.245	2411	6751		32411
5134	-18	1095	8.0	G0		25	44.625	--	1	71.968	-18	02	38.51	--	1	71.968				6410
5135	-65	469	7.9	K2		25	46.619	0.09	4	70.644	-65	47	00.87	0.18	4	70.644				18926
5136	-36	2251	9.0	F5	5	25	54.031	0.01	4	70.600	-36	01	31.24	0.22	4	70.600				6411
5137	-29	2265	8.4	F2		25	55.740	0.15	4	70.576	-29	36	51.44	0.10	4	70.576				6412
5138	-31	2480	8.6	K5		26	01.212	0.13	4	70.747	-31	03	33.07	0.10	4	70.747				6413
5139	-20	1095	8.7	K5		26	01.550	0.04	4	71.032	-20	26	12.71	0.14	4	71.032				6414
5140	-69	373	9.2	G0		26	02.587	0.07	5	71.009	-69	38	13.54	0.21	4	70.989				18927
5141	-4	1141	7.5	A3	5	26	04.964	0.30	2	70.555	-4	44	11.86	0.01	2	70.555				6415
5142	-63	457	9.2	G5		26	05.747	0.19	4	70.563	-63	13	29.13	0.16	4	70.563				6416
5143f	-20	1096	2.96	G0		26	06.079	0.04	29	70.933	-20	47	54.51	0.07	29	70.933	204	6762	1175	30204
5144	-26	2232	8.4	K0		26	12.739	0.08	4	71.445	-26	46	39.63	0.06	4	71.445				6417
5145	-30	2410	9.0	F5		26	15.969	0.08	4	70.970	-30	03	58.93	0.09	4	70.970				6418
5146*	-39	1985	7.6	G5	5	26	18.725	0.05	4	70.657	-38	56	48.13	0.11	4	70.657				6419
5147	-2	1263	8.5	A0		26	30.927	0.01	2	70.555	-2	48	53.31	0.02	2	70.555				6420
5148	+1	1028	8.5	K0		26	31.305	0.16	3	72.118	+1	06	54.98	0.25	3	72.118				6421
5149	-32	2368	8.8	K0		26	31.421	0.12	5	71.419	-32	05	00.27	0.16	5	71.419				6422
5150	-44	2071	8.5	K5		26	31.571	0.08	4	70.012	-44	30	01.23	0.10	4	70.012				648
5151	-48	1818	8.0	K0	5	26	36.301	0.09	5	71.027	-48	44	38.16	0.08	4	70.749				649
5152	-5	1268	8.0	K2		26	39.428	0.22	2	72.058	-5	29	01.69	0.07	2	72.058				6423
5153	-6	1192	8.4	K5		26	39.808	--	1	71.066	-6	40	25.88	--	1	71.066				6424
5154	-19	1190	8.4	K0		26	52.519	0.01	2	70.614	-19	10	51.77	0.20	2	70.614				6425
5155	-17	1148	8.3	K2		26	55.251	0.19	3	71.696	-17	21	35.20	0.01	2	72.000				6426
5156	+3	930	8.8	K0	5	27	00.397	0.17	3	71.072	+3	53	21.13	0.14	3	71.072				6427
5157	-33	2351	8.9	K5		27	01.279	0.04	4	70.394	-33	52	15.17	0.30	4	70.394				6428
5158	-70	393	8.1	K2		27	07.407	0.11	4	70.413	-70	06	14.61	0.11	4	70.413				18928
5159	-0	970	7.9	A2		27	08.719	0.01	2	70.535	-0	50	25.44	0.06	2	70.535		6790		6429
5160	-45	1999	9.08	G0		27	11.907	0.05	4	71.163	-45	50	26.02	0.05	4	71.163		6793		650
5161	-25	2470	8.4	K0	5	27	14.609	0.08	4	70.692	-25	19	43.03	0.23	3	70.675				6430
5162	-60	425	7.91	K2		27	25.391	0.11	4	70.404	-60	43	06.26	0.06	4	70.404		6803		6431
5163	-59	475	8.6	M0		27	33.406	0.15	5	70.534	-59	11	06.65	0.11	4	70.463				6432
5164	-22	1129	7.72	G5		27	33.842	0.09	4	69.968	-22	45	24.23	0.13	4	69.968		6804		6433
5165	-34	2279	8.5	G5		27	35.841	0.06	4	70.615	-34	33	13.30	0.10	4	70.615				6434
5166	-58	517	8.8	K5	5	27	40.826	0.13	4	70.064	-58	24	44.69	0.11	4	70.064				6435
5167	-51	1510	9.0	K0		27	41.103	0.19	5	71.048	-51	36	55.10	0.16	5	71.048				651
5168	+4	949	6.37	K0		27	41.306	0.23	3	72.093	+4	10	02.65	0.04	3	72.093		6806		6436
5169	-42	1959	8.5	K0		27	43.398	0.02	4	70.852	-42	06	16.02	0.20	4	70.852				652
5170	-11	1195	8.7	G0		27	46.722	0.07	4	71.530	-11	28	39.76	0.15	2	71.964				6437
5171	-35	2327	9.2	K2	5	27	47.578	0.11	5	70.575	-35	26	18.70	0.12	5	70.575				6438
5172	-12	1182	8.5	K7		27	54.546	0.05	2	71.950	-12	48	00.03	0.05	2	71.950				6439
5173	-7	1099	6.24	B3		27	55.685	0.14	2	71.985	-7	28	19.85	0.10	2	71.985		6810		6440
5174	+0	1098	8.2	A5		28	00.539	0.06	2	72.067	+0	19	41.98	0.04	2	72.067				6441
5175	-40	1920	8.0	K0		28	00.924	0.11	5	70.906	-40	46	50.13	0.11	5	70.906				653
5176	-44	2088	8.5	M0	5	28	06.733	0.11	4	70.505	-44	48	50.34	0.17	4	70.505				654
5177	-0	978	8.8	B8		28	14.903	0.06	2	71.289	-0	00	30.25	0.32	2	71.289				6442
5178	-39	2007	9.2	G5		28	24.034	0.07	4	70.534	-39	48	13.39	0.20	4	70.534				6443
5179	-13	1171	8.6	K5		28	34.962	0.09	2	72.025	-13	46	16.73	0.11	2	72.025				6444
5180	-43	1885	7.71	K0		28	36.558	0.20	4	70.490	-43	37	00.55	0.07	4	70.490		6822		655
5181	-10	1204	7.01	G0	5	28	37.698	--	1	71.096	-10	06	55.07	--	1	71.096		6824		6445
5182	-53	879	8.05	F5		28	39.843	0.07	4	70.199	-53	18	10.55	0.14	4	70.199		6825		6446
5183	-21	1181	7.7	K2		28	40.991	0.08	5	69.875	-21	26	40.17	0.12	5	69.875				6447
5184	-62	478	8.59	K0		28	44.237	0.13	4	70.232	-61	57	32.61	0.14	4	70.232		6828		6448
5185	+2	983	8.4	F2		28	46.741	0.06	4	70.173	+3	02	02.96	0.11	4	70.173				25917
5186	-47	1884	5.54	G5	5	28	46.933	0.03	92	71.249	-47	06	49.02	0.03	90	71.241	1152	6830	1183	31152
5187	-5	1281	9.9v	F8		28	51.306	0.06	4	70.926	-5	44	24.13	0.08	4	70.926				25918
5188	+1	1045	8.3	B5		28	54.235	0.17	2	70.584	+1	39	13.95	0.19	2	70.584				6449
5189	-66	418	8.15	K0		29	06.514	0.13	4	70.496	-66	43	28.28	0.15	4	70.496		6838		18929
5190	-52	735	8.9	K0		29	12.087	0.10	3	70.922	-52	28	39.10	0.05	3	70.922				6450
5191	-50	1810	7.94	K5	5	29	15.815	0.14	6	70.801	-50	08	11.58	0.13	5	70.799		6840		656
5192	-37	2248	8.8	K5		29	18.518	0.12	5	71.120	-37	46	44.11	0.25	4	70.865				6451
5193	-35	2348	3.92	K0		29	26.175	0.10	6	70.273	-35	30	22.43	0.12	6	70.273	2413	6846	1184	32413
5194	-0	983	2.48	B0		29	27.025	0.02	117	71.260	-0	20	04.58	0.07	111	71.256	206	6847	1185	80206
5195	-29	2316	8.1	F5		29	37.448	0.11	4	70.450	-29	41	31.61	0.13	4	70.450				652
5196	-28	2234	8.1	K0	5	29	42.077	0.05	4	69.677	-28	08	26.03	0.10	4	69.677				6453
5197	-24	3170	8.5	A0		29	46.076	0.10	4	69.960	-23	58	15.40	0.20	4	69.960				6454
5198	-15	1072	8.3	K0		29	52.716	0.17	2	70.525	-15	36	16.57	0.23	2	70.525				6455
5199	-46	1890	8.0	K0		30	06.630	0.06	4	70.404	-46									

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
5201	- 5	1285	8.7	A0	5 30 18.545	0.07	2	71.473	- 4 59' 43.19	0.23	2	71.473				6457
5202	+ 2	995	8.7	A0	30 26.387	0.04	2	72.063	+ 2 27 42.66	0.06	2	72.063				6458
5203	-33	2381	8.2	K2	30 27.733	0.10	5	70.376	-33 33 55.14	0.23	4	70.445				6459
5204	- 4	1164	8.0	B5	30 28.672	--	1	70.976	- 4 36 02.76	--	1	70.976				6460
5205	-17	1166	2.69	F0	30 31.403	0.03	57	71.730	-17 51 24.18	0.04	54	71.711	207	6874	1189	30207
5206	-17	1167	8.2	K5	5 30 47.736	0.01	2	71.599	-17 17 32.06	0.37	2	71.599				6461
5207	- 1	943	5.3v	B2	30 59.063	0.09	4	70.127	- 1 11 22.96	0.13	4	70.127		6884		25923
5208	-25	2507	7.1	M0	30 59.461	0.03	4	70.432	-25 24 03.84	0.09	4	70.432				6462
5209	-57	834	8.3	K5	31 00.087	0.11	4	69.235	-57 17 21.06	0.17	4	69.235				6463
5210	- 3	1135	8.8	G5	31 00.554	0.07	2	72.115	- 3 08 35.15	0.12	2	72.115				6464
5211	-18	1120	8.7	K0	5 31 02.131	0.02	2	72.084	-18 35 42.93	0.00	2	72.084				6465
5212	+14	947	5.58	B3	31 03.651	0.20	6	71.332	+14 16 20.20	0.17	5	71.181	2414	6886	1191	32414
5213	- 9	1175	8.8	A5	31 04.175	--	1	71.888	- 9 25 35.34	--	1	71.888				6466
5214	- 3	1136	6.98	K2	31 08.026	0.16	2	72.379	- 3 29 48.06	0.15	2	72.379		6888		6467
5215	-53	888	8.5	K5	31 08.727	0.15	4	69.656	-53 50 21.76	0.05	3	69.256				6468
5216	-26	2291	8.9	K0	5 31 18.011	0.12	4	70.910	-26 47 02.67	0.04	4	70.910				6469
5217	-35	2367	5.75	K0	31 20.133	0.13	5	70.967	-35 10 22.28	0.14	4	70.674		6890		6470
5218	-48	1859	9.0	G5	31 24.158	0.16	4	70.226	-48 32 35.59	0.12	4	70.226				658
5219	+ 2	1003	8.3	A2	31 26.643	0.05	2	71.638	+ 3 01 28.01	0.09	2	71.638				6471
5220	-17	1170	8.8	K0	31 27.110	--	1	71.946	-17 49 07.97	--	1	71.946				6472
5221	-54	850	8.2	K2	5 31 29.105	0.19	5	70.915	-54 32 01.77	0.15	5	70.915				6473
5222	-42	1997	8.8	G5	31 29.115	0.22	4	70.711	-41 58 23.15	0.11	4	70.711				659
5223	-30	2479	8.4	K0	31 29.457	0.14	4	69.959	-30 48 06.27	0.10	4	69.959				6474
5224	- 1	950	6.22	K0	31 32.031	0.26	2	72.033	- 1 30 10.94	0.25	2	72.033		6894		6475
5225	-19	1210	8.8	A2	31 38.639	0.25	2	72.462	-19 27 49.52	0.06	2	72.462				6476
5226	-14	1170	8.6	K2	5 31 38.669	0.09	2	70.623	-14 50 16.02	0.10	2	70.623				6477
5227	-81	148	8.5	A3	31 44.942	0.10	4	69.407	-81 37 24.15	0.18	4	69.407				18930
5227 SP					31 44.958	0.12	4	71.409	-81 37 23.70	0.20	4	71.409				18930
5228	-32	2413	8.6	K0	31 46.161	0.16	4	70.415	-32 39 19.85	0.05	4	70.415				6478
5229	-39	2045	8.7	K0	31 46.378	0.18	4	70.515	-39 10 54.43	0.14	4	70.515				6479
5230	-47	1912	8.5	G5	5 31 47.269	0.13	4	70.513	-47 41 45.49	0.23	4	70.513				660
5231	-31	2548	9.1	K0	31 54.337	0.15	4	69.985	-31 29 01.55	0.14	4	69.985				6480
5232	-35	2373	9.1	K0	31 58.979	0.40	4	69.907	-35 01 55.99	0.11	4	69.907				6481
5233	+18	881	8.6	A0	32 02.927	0.04	2	72.932	+18 35 48.71	0.16	2	72.932				25925
5234	+ 9	877	4.53	B0	32 04.422	0.03	84	70.922	+ 9 27 26.55	0.03	82	70.917	208	6907	1194	80208
5235	-60	436	7.6	K0	5 32 04.513	0.35	4	70.236	-60 09 29.83	0.20	4	70.236				6482
5236	- 8	1167	8.2	F2	32 05.426	0.22	2	70.991	- 8 14 22.35	0.14	2	70.991				6483
5237	-10	1224	8.5	K5	32 07.321	0.07	2	71.875	-10 32 00.08	0.04	2	71.875				6484
5238	- 1	953	8.2	G5	32 15.607	0.10	2	72.021	- 0 59 09.88	0.30	2	72.021				6485
5239	- 6	1231	9.2	A	32 22.387	--	1	71.957	- 6 02 18.34	--	1	71.957		6912		6486
5240	- 7	1124	6.93	K0	5 32 22.664	0.04	2	72.058	- 7 13 56.77	0.00	2	72.058				6487
5241	+23	954	5.28	B3	32 23.787	0.07	6	71.592	+24 00 28.83	0.19	6	71.592	2415	6916		32415
5242*	-51	1540	8.7	K0	32 24.665	0.11	4	70.466	-51 05 55.11	0.05	4	70.466				661
5243	-11	1219	8.4	A0	32 24.752	--	1	71.938	-11 49 50.48	--	1	71.938				6488
5244	- 5	1308	9.01	B9	32 27.993	0.16	2	72.353	- 5 32 17.20	0.29	2	72.353				24117
5245	-25	2526	8.7	K0	5 32 29.819	0.06	4	70.431	-25 34 45.60	0.10	4	70.431				6489
5246	- 4	1176	8.5	B8	32 30.370	--	1	70.965	- 4 23 10.04	--	1	70.965				6490
5247	-36	2319	9.3	K2	32 31.182	0.11	4	70.169	-36 27 57.50	0.12	4	70.169				6491
5248	-28	2274	8.7	K0	32 33.942	0.09	5	70.561	-28 22 18.25	0.22	5	70.561				6492
5249	- 0	1007	8.2	B8	32 35.790	0.05	2	71.996	- 0 18 04.87	0.05	2	71.996				6493
5250	-64	456	5.30	G5	5 32 43.169	0.07	6	70.129	-64 15 37.65	0.10	6	70.129	2418	6927	1197	32418
5251	-54	854	6.35	F5	32 44.884	0.13	6	71.593	-54 56 05.26	0.18	6	71.593	2419	6929	1198	32419
5252			9.3	--	32 47.042	--	1	71.946	- 5 49 40.42	--	1	71.946				24131
5253	-34	2327	8.8	G5	32 47.282	0.02	5	70.362	-34 30 32.87	0.16	4	70.428				6494
5254	-21	1205	7.5	K0	32 49.531	0.13	3	70.673	-21 05 57.79	0.05	3	70.673				6495
5255	-15	1085	8.6	K7	5 32 49.658	--	1	71.886	-15 10 24.41	--	1	71.886				6496
5256	- 5	1317	10.0	G0	32 53.526	--	1	72.878	- 5 11 10.06	--	1	72.878				24128
5257	- 6	1241	2.89	Oe5	32 59.133	0.06	18	72.156	- 5 56 28.28	0.08	17	72.160	209	6937	1201	30209
5258	- 5	1325	9.0	B8	33 03.764	0.09	3	72.253	- 5 17 54.86	0.11	3	72.253				24132
5259	-66	431	8.4	F8	33 03.994	0.13	4	70.235	-65 58 30.31	0.05	4	70.235				18931
5260	- 5	1327	9.0	A0	5 33 06.489	--	1	71.888	- 5 08 13.28	--	1	71.888				24134
5261	+ 1	1064	8.8	G5	33 10.258	0.13	2	71.584	+ 1 17 31.26	0.06	2	71.584				6497
5262	-62	487	3.8v	F5p	33 11.304	0.04	33	71.054	-62 31 19.94	0.07	32	71.061	212	6944	1203	30212
5263	+ 4	982	8.4	F5	33 11.905	0.04	2	71.442	+ 4 59 53.79	0.04	2	71.442				6498
5264	-64	458	9.2	A2	33 12.643	0.16	5	71.176	-64 27 02.61	0.20	4	71.198				18932
5265*	+ 8	1011	8.7	G0	5 33 19.384	--	1	70.129	+ 8 05 04.17	--	1	70.129				25932
5266	-40	1967	9.0	K0	33 22.551	0.11	4	70.160	-40 38 01.98	0.22	4	70.160				662
5267	- 5	1330	8.2	B5	33 26.901	0.05	4	70.659	- 5 39 32.92	0.09	4	70.659				25933
5268	-63	463	8.1	K2	33 30.828	0.15	4	70.735	-63 34 46.01	0.12	3	70.733				6499
5269	-13	1190	8.1	K0	33 35.441	0.10	3	71.077	-13 16 32.65	0.18	3	71.077				6500
5270	-20	1126	8.2	K5	5 33 38.113	0.10	2	71.534	-19 58 38.87	0.07	2	71.534				6501
5271	-37	2287	9.1	F5	33 38.633	0.08	4	70.479	-37 34 32.72	0.09	4	70.479				6502
5272	- 1	969	1.75	B0	33 40.476	0.06	12	72.100	- 1 13 56.28	0.14	12	72.100	210	6960	1204	30210
5273	-12	1212	8.8	G0	33 44.244	0.18	2	70.487	-12 22 13.56	0.27	2	70.487				6503
5274	-55	835	8.6	K5	33 44.609	0.07	4	70.468	-55 17 14.24	0.14	4	70.468				6504

5207 5.3m to 5.7m.

5242 SDS, 9.3m-9.6m, 1°4, 68°.

5262 3.8m to 5.7m.

5265 A 4198AB, 9.4m-9.9m, 0°6, 122°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
5275	-25	2539	7.4	N0	33 46.011	0.03	4	70.170	-25 46 08.82	0.05	4	70.170				6505
5276	-5	1334	6.45	B3	33 47.871	0.00	2	72.062	-5 40 41.72	0.24	2	72.062		6964		6506
5277*	-47	1931	9.2	G5	33 51.293	0.11	4	69.984	-46 58 34.50	0.32	4	69.984				663
5278	-76	333	5.06	K0	33 51.735	0.04	40	70.595	-76 22 34.54	0.05	36	70.468	214	6966	1205	30214
5278 SP					33 51.721	0.09	14	70.726	-76 22 33.88	0.20	13	70.686	214	6966	1205	50214
5279	-13	1192	8.6	A0	33 52.380	0.25	2	72.032	-13 51 09.35	-	1	70.984				6507
5280	-30	2513	7.54	G5	34 01.662	0.11	4	69.933	-30 33 59.79	0.04	4	69.933		6969		6508
5281*	+2	1016	8.9	A5	34 05.004	0.16	4	71.125	+2 39 23.88	0.25	4	71.125				25937
5282	+10	828	6.10	K0	34 17.611	0.09	6	71.642	+11 00 20.19	0.13	6	71.642	2420	6975	1207	32420
5283	-7	1132	8.6	K0	34 19.564	0.07	3	70.976	-7 06 58.15	0.17	2	71.416				6509
5284	-49	1803	8.7	G5	34 24.296	0.11	4	70.145	-49 46 56.06	0.20	4	70.145				664
5285	+21	908	3.00	B3p	34 39.272	0.13	5	72.484	+21 06 49.29	0.28	5	72.484	211	6985	1208	30211
5286	-11	1238	6.02	A0	34 48.859	0.07	8	71.551	-11 48 16.09	0.13	6	71.560	2421	6988		32421
5287	-2	1316	8.9	F5	34 52.073	0.19	2	71.961	-2 06 44.70	0.27	2	71.961				6510
5288	-46	1923	9.0	F5	34 52.400	0.06	4	69.683	-46 03 09.63	0.08	4	69.683				665
5289*	-1	982	7.7	B8	35 02.727	0.12	2	71.868	-1 27 03.42	0.14	2	71.868				25942
5290	-22	1170	8.5	G5	35 03.704	0.06	4	69.828	-22 51 51.13	0.06	4	69.828				6511
5291	-16	1185	7.8	K5	35 05.941	0.12	2	70.595	-16 43 44.79	0.16	2	70.595				6512
5292	-62	493	8.2	G5	35 08.991	0.07	5	70.258	-62 04 53.40	0.18	4	70.119				6513
5293	-2	1319	8.5	A0	35 09.607	0.10	2	71.586	-2 28 19.77	0.15	2	71.586				6514
5294	+0	1139	8.8	A2	35 16.119	0.02	2	71.998	+0 17 20.09	0.40	2	71.998				6515
5295	-48	1891	7.5	F5	35 16.975	0.10	5	70.136	-48 18 49.97	0.15	4	70.146				666
5296	-6	1264	8.9	A0	35 21.172	0.05	4	70.203	-6 44 12.57	0.14	4	70.203				25945
5297	-57	851	7.52	M0	35 32.134	0.16	4	70.442	-57 29 15.22	0.09	4	70.442	7003			6516
5298	-27	2391	8.5	F5	35 33.958	0.10	4	69.939	-27 36 47.47	0.13	4	69.939				6517
5299	-71	354	8.5	K0	35 39.018	0.15	4	70.722	-71 46 35.08	0.08	4	70.722				18933
5300	-1	987	6.74	B3	35 41.371	0.19	3	71.663	-1 11 49.76	0.32	3	71.663	7010			6518
5301	-4	1198	6.76	A2	35 46.329	0.15	2	71.923	-4 08 09.42	0.02	2	71.923	7012	1209		6519
5302	-50	1858	8.0	K0	35 55.007	0.08	4	70.780	-50 26 14.17	0.11	4	70.780				667
5303	-44	2145	9.0	K2	35 57.252	0.16	4	70.469	-44 38 39.41	0.11	4	70.469				668
5304	-73	316	5.61	M3	35 59.107	0.14	6	70.636	-73 46 17.66	0.15	6	70.636	2422	7017		32422
5304 SP					35 59.018	0.08	25	71.331	-73 46 17.62	0.20	21	71.233	2422	7017		52422
5305	-14	1191	8.5	F0	35 59.403	0.26	2	72.464	-14 22 07.68	0.11	2	72.464				6520
5306	-56	886	8.41	K5	36 00.369	0.16	5	71.008	-56 12 59.12	0.32	5	71.008		7018		6521
5307	-18	1144	8.5	K2	36 01.164	0.13	2	72.494	-18 44 28.61	0.09	2	72.494				6522
5308	-47	1951	7.53	K0	36 05.812	0.10	4	70.498	-47 13 45.63	0.08	4	70.498		7023		669
5309	-27	2395	6.75	K2	36 07.379	0.04	22	70.019	-27 14 18.58	0.05	21	69.985	1153	7025	1210	31153
5310	-35	2417	8.9	K5	36 08.416	0.04	5	70.999	-35 13 37.73	0.13	4	70.714				6523
5311	-39	2080	8.3	G0	36 15.241	0.09	4	70.948	-39 49 49.70	0.08	4	70.948				6524
5312	+2	1028	8.3	B9	36 15.616	0.10	2	72.543	+2 50 04.26	0.24	2	72.543				6525
5313	-8	1183	6.76	B9	36 15.905	0.19	2	71.987	-8 29 54.61	0.09	2	71.987		7033		6526
5314	-66	437	8.7	M1	36 20.071	0.06	4	70.027	-66 19 09.09	0.18	4	70.027				18934
5315	-59	485	8.8	K0	36 20.416	0.20	4	70.646	-59 31 30.49	0.05	4	70.646				6527
5316	+4	998	8.9	K7	36 21.209	-	1	71.976	+4 06 41.82	-	1	71.976		7035		6528
5317	-13	1200	8.1	A2	36 22.133	-	1	71.968	-12 58 11.34	-	1	71.968				6529
5318	-41	1981	8.8	K0	36 32.508	0.10	4	70.649	-41 40 43.43	0.14	4	70.649				670
5319	+4	1002	4.54	B3p	36 32.631	0.06	6	70.979	+4 05 40.60	0.14	6	70.979	2423	7042		32423
5320	+25	902	5.00	B3	36 38.169	0.04	7	70.630	+25 52 14.69	0.14	6	70.581	2424	7047		32424
5321	-5	1353	8.4	F5	36 38.650	0.16	2	72.550	-5 55 27.40	0.03	2	72.550				6530
5322	-11	1249	8.7	G0	36 42.551	0.05	2	72.473	-11 03 30.89	0.09	2	72.473				6531
5323	-42	2051	9.0	G5	36 45.279	0.12	4	71.263	-42 38 12.35	0.12	4	71.263				671
5324	-54	868	8.34	K2	36 50.708	0.19	4	70.478	-54 50 38.98	0.16	4	70.478		7053		6532
5325	-17	1198	8.4	F0	36 55.866	0.16	2	72.399	-17 51 29.41	0.09	2	72.399				6533
5326	+0	1145	7.8	K0	37 03.293	0.07	3	71.713	+0 48 27.73	0.19	2	72.026				6534
5327	+4	1003	8.4	B9	37 06.360	0.19	2	71.592	+4 24 30.58	0.02	2	71.592				6535
5328	-24	3281	7.9	K2	37 08.257	0.14	4	70.071	-24 54 25.98	0.14	4	70.071				6536
5329	-37	2322	8.2	K2	37 10.930	0.12	4	70.545	-37 47 07.95	0.17	4	70.545				6537
5330	+1	1088	7.3	B9	37 13.599	0.16	2	71.511	+1 27 56.39	0.30	2	71.511				6538
5331	-15	1110	8.0	K0	37 19.768	0.03	2	71.581	-15 53 39.74	0.07	2	71.581				6539
5332*	-61	491	8.21	K0	37 26.701	0.14	6	71.077	-61 31 13.32	0.06	6	71.077		7069		6540
5333	-40	2004	9.5	G5	37 33.784	0.08	4	70.803	-40 10 45.66	0.23	4	70.803				672
5334	-43	1964	8.2	K2	37 34.184	0.14	3	70.225	-43 45 53.32	0.08	3	70.225				673
5335	-73	321	7.9	K0	37 35.670	0.08	4	70.213	-73 00 36.96	0.11	4	70.213				18935
5336p	-20	1147	6.54	B8	37 35.775	0.08	4	70.633	-20 27 40.09	0.12	4	70.633		7074		6541
5337	-48	1915	9.4	A2	37 41.736	0.15	4	70.809	-48 14 53.52	0.08	4	70.809				674
5338	-51	1570	9.0	A5	37 44.177	0.07	4	69.713	-51 39 52.24	0.10	4	69.713				675
5339	-33	2468	8.9	K0	37 45.363	0.06	4	70.527	-33 00 22.64	0.16	4	70.527				6542
5340	-36	2371	9.02	K7	37 45.630	0.05	4	70.854	-36 35 32.97	0.12	4	70.854		7076		6543
5341	-78	194	9.2	K0	37 48.858	0.06	4	69.626	-78 49 40.96	0.17	4	69.626				18936
5341 SP					37 48.603	0.40	4	70.835	-78 49 40.97	0.30	4	70.835				18936
5342	-34	2375	2.75	B5p	37 50.217	0.03	75	71.499	-34 05 59.13	0.04	73	71.469	215	7078	1218	30215
5343	-29	2398	8.5	F0	37 51.202	0.09	4	70.713	-29 39 28.40	0.11	4	70.713				6544
5344	-58	535	8.4	K0	37 53.077	0.06	4	69.663	-58 17 47.66	0.08	4	69.663				6545
5345	-34	2378	8.8	K0	37 54.218	0.05	5	71.003	-34 39 42.30	0.26	4	70.719				6546
5346	-30	2552	7.7	K2	38 02.822	0.12	4	70.632	-30 39 41.69	0.26	4	70.632				6547

5277 9.3m-10.1m, 0°3, 244°.

5281 A 4210AB, 8.9m-11.7m, 0°7, 268°.

5289 A 4222AB, 7.9m-8.5m, 0°8.

5332 SDS, 8.9m-9.1m, 1°0, 56°.

5336 A 4260, 7.5m, 11°0, 123°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
5347	-27	2415	8.5	F2	5 38 03.936	0.19	4	70.259	-26 58 01.18	0.15	4	70.259		7086		6548
5348	-7	1148	7.56	K0	38 07.828	0.26	2	71.438	-7 41 04.58	0.32	2	71.438				6549
5349	-10	1255	8.2	B9	38 09.469	0.07	2	71.457	-10 27 28.97	0.18	2	71.457				6550
5350	-74	341	8.0	G5	38 10.467	0.09	5	70.601	-74 44 36.96	0.15	4	70.547				18937
5351	-38	2151	9.2	K8	38 21.740	0.14	4	70.176	-38 50 56.92	0.18	4	70.176				6551
5352	-23	2976	8.5	A5	5 38 24.067	0.15	4	70.481	-23 03 39.57	0.12	4	70.481				6552
5353	-12	1232	7.9	G5	38 25.116	0.05	2	70.464	-12 15 15.29	---	1	70.071				6553
5354	-13	1213	8.7	K0	38 27.713	0.07	2	71.519	-13 42 25.67	0.01	2	71.519				6554
5355	-3	1170	8.0	K2	38 28.407	0.11	2	70.539	-3 52 03.88	0.25	2	70.539				6555
5356	-2	1344	8.5	A0	38 31.697	0.14	2	71.507	-2 44 29.30	0.04	2	71.507				6556
5357	-21	1229	8.6	K0	5 38 32.404	0.08	4	70.216	-21 15 16.99	0.09	4	70.216				6557
5358	-25	2594	8.7	B9	38 43.219	0.05	4	69.943	-25 41 50.41	0.10	4	69.943				6558
5359	+2	1036	8.7	F8	38 44.717	0.12	2	71.537	+2 20 14.07	0.01	2	71.537				6559
5360	-1	1009	8.9	A0	38 47.830	0.10	3	71.036	-1 21 02.46	0.09	2	71.506				6560
5361	-28	2361	9.0	G0	38 48.774	0.14	4	70.158	-28 17 53.07	0.21	4	70.158				6561
5362	-21	1231	8.3	F0	5 38 52.093	0.14	4	69.507	-21 34 05.70	0.18	4	69.507				6562
5363	-31	2651	8.8	G5	38 55.879	0.16	4	70.045	-31 25 34.30	0.11	4	70.045				6563
5364	-7	1151	8.3	B8	38 56.782	0.32	2	71.488	-6 57 33.55	0.10	2	71.488				6564
5365	-49	1837	8.8	G5	39 00.399	0.12	4	69.553	-49 33 51.95	0.12	4	69.553				676
5366	-32	2488	8.5	K0	39 02.233	0.19	5	70.144	-32 01 15.39	0.13	4	70.155				6565
5367	-75	329	8.3	G0	5 39 09.289	0.17	4	69.910	-75 28 36.85	0.14	4	69.910				18938
5367 SP					39 09.301	0.22	4	70.399	-75 28 36.82	0.28	4	70.399				18938
5368	-9	1204	8.7	F0	39 13.354	0.24	2	71.339	-9 31 00.04	0.06	2	71.339				6566
5369*	-69	467	9.3	G0	39 16.642	0.18	4	69.699	-69 45 58.65	0.11	4	69.699				18939
5370	-80	159	8.4	K0	39 19.631	0.18	6	70.781	-80 52 47.44	0.16	5	70.919				18940
5370 SP					5 39 19.536	0.15	4	70.954	-80 52 47.66	0.19	4	70.954				18940
5371	-67	486	8.4	F5	39 39.009	0.11	4	69.623	-67 03 59.12	0.17	4	69.623				18941
5372	+2	1040	6.61	B8	39 41.142	0.11	2	70.487	+2 20 38.67	0.03	2	70.487		7131		6567
5373	-62	501	8.28	K2	39 42.494	0.21	4	69.658	-62 57 42.09	0.22	4	69.658		7132		6568
5374	-19	1244	8.6	K0	39 49.712	0.09	2	70.462	-19 00 22.31	0.05	2	70.462				6569
5375	-84	75	6.24	A0	5 39 50.435	0.02	173	71.037	-84 48 56.68	0.03	167	71.025	1659	7134	1222	61659
5375 SP					39 50.414	0.02	125	71.093	-84 48 56.66	0.05	126	71.096	1659	7134	1222	71659
5376	-42	2081	8.2	K2	39 51.931	0.17	4	69.692	-42 17 48.69	0.18	4	69.692				677
5377	+1	1105	5.24	G5	39 53.306	0.10	6	68.708	+1 27 06.79	0.08	6	68.708	2427	7136		32427
5378	-24	3339	8.6	K5	39 53.734	0.09	4	69.407	-24 25 39.06	0.17	4	69.407				6570
5379	-0	1059	7.08	K0	5 39 59.214	0.08	2	70.448	-0 02 19.49	0.04	2	70.448			1224	6571
5380	-54	876	7.72	K5	40 10.334	0.09	4	69.485	-54 29 15.20	0.16	4	69.485		7143		6572
5381	-50	1891	8.5	K5	40 11.259	0.17	4	69.809	-50 46 41.72	0.11	4	69.809				678
5382	-44	2190	8.68	K2	40 12.309	0.12	4	69.694	-44 56 59.72	0.03	4	69.694		7145		679
5383	-30	2571	6.22	A0	40 17.139	0.13	6	69.838	-30 33 29.79	0.12	6	69.838	2428	7147	1225	32428
5384	-17	1215	8.2	A0	5 40 21.414	0.09	2	71.330	-17 02 24.33	0.15	2	71.330				6573
5385	-58	541	7.9	K5	40 27.642	0.12	5	70.485	-58 31 20.22	0.14	4	70.403				6574
5386	-81	152	7.24	F5	40 38.005	0.16	5	70.609	-81 38 19.05	0.19	5	70.609		7155		18942
5386 SP					40 37.941	0.16	4	70.312	-81 38 18.94	0.08	4	70.312		7155		18942
5387	-43	1987	7.50	K0	40 38.298	0.10	4	69.724	-43 31 52.28	0.10	4	69.724		7156		680
5388	-11	1269	8.7	A0	5 40 41.294	0.18	2	70.464	-11 50 47.99	---	1	70.071				6575
5389	-5	1370	8.8	A0	40 43.992	0.42	2	71.438	-5 01 08.91	0.21	2	71.438				6576
5390	-56	909	7.82	K0	40 45.487	0.05	4	69.948	-56 27 40.09	0.13	4	69.948		7157		6577
5391	-52	767	8.1	K2	40 50.211	0.05	4	70.099	-52 00 56.34	0.09	4	70.099				6578
5392	-29	2436	8.3	A3	40 56.762	0.07	4	69.185	-29 21 06.64	0.09	4	69.185				6579
5393	-34	2411	8.3	K0	5 41 01.170	0.11	4	70.358	-34 06 13.55	0.15	4	70.358				6580
5394	+3	1018	8.4	F0	41 03.846	0.03	2	71.412	+3 58 58.48	0.23	2	71.412				6581
5395	-33	2504	7.00	M0	41 24.745	0.05	4	70.142	-33 26 47.22	0.11	4	70.142		7167		6582
5396	-25	2622	8.5	G5	41 26.842	0.11	4	69.246	-25 38 34.70	0.08	4	69.246				6583
5397	-14	1221	8.5	A7	41 29.547	0.04	2	71.488	-14 41 30.38	0.52	2	71.488				6584
5398	-6	1297	8.8	A0	5 41 36.704	0.51	2	71.506	-6 45 15.10	0.04	2	71.506				6585
5399*	+0	1168	9.0	A3	41 37.526	0.06	4	71.352	+0 56 15.48	0.08	4	71.352				25973
5400	-19	1248	7.7	G5	41 38.219	0.05	2	71.468	-19 40 22.63	0.36	2	71.468				6586
5401*	+14	1008	7.14	G0	41 39.689	0.03	5	71.774	+15 02 34.99	0.20	4	71.696		7175		25974
5402	-67	492	7.15	A0	41 49.127	0.09	6	70.322	-67 25 29.93	0.10	6	70.322	2429	7177		32429
5403	-72	405	8.7	G0	5 41 50.567	0.11	4	70.207	-72 17 49.04	0.13	4	70.207				18943
5404	-39	2140	6.29	F0	41 51.084	0.13	6	70.845	-39 25 40.82	0.08	6	70.845	2430	7179	1228	32430
5405	-18	1174	7.6	K0	41 52.462	0.04	2	71.541	-18 18 29.39	0.01	2	71.541				6587
5406	-39	2142	8.0	G0	41 57.764	0.06	4	70.156	-39 56 40.53	0.10	4	70.156				6588
5407	-2	1358	8.5	F2	41 57.805	0.31	2	71.966	-2 55 55.62	0.09	2	71.966				6589
5408	-5	1379	7.8	F2	5 41 58.083	0.15	2	71.558	-5 29 05.74	0.13	2	71.558				6590
5409	-37	2365	8.5	F5	41 58.939	0.14	4	70.489	-37 43 48.00	0.10	4	70.489				6591
5410	-4	1231	7.5	A0	42 03.412	0.37	3	72.113	-4 42 58.18	0.10	3	72.113				6592
5411	-6	1302	6.67	A2	42 07.471	0.12	2	71.577	-6 53 04.50	0.00	2	71.577		7184		6593
5412	-30	2583	8.5	F0	42 09.209	0.11	4	69.508	-30 37 52.85	0.15	4	69.508				6594
5413	-47	1998	8.2	M0	5 42 10.122	0.18	4	70.464	-47 34 01.25	0.06	4	70.464				681
5414	-27	2462	7.7	A3	42 13.397	0.10	5	71.099	-27 33 56.34	0.11	5	71.099				6595
5415	-36	2424	8.9	K0	42 14.684	0.12	4	70.506	-36 05 44.78	0.27	4	70.506				6596
5416	-45	2132	8.05	K0	42 17.307	0.06	4	69.999	-45 38 31.60	0.05	4	69.999		7190		682
5417	-20	1171	6.44	G0	42 19.132	0.07	4	70.398	-20 08 49.45	0.16	4	70.398		7193	1231	6597

5369 SDS, 9.7m-10.0m, 1"5, 148°.
 5399 A 4320AB, 9.2m-9.2m, 0"2, 311°.

5401 A 4323 7.5m-8.3m, 0"6, 119°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
5418	-35	2488	8.9	F8	42 20.047	0.15	4	70.570	-35 29 45.10	0.12	4	70.570				6599
5419	+ 0	1174	9.0	G5	42 20.112	0.15	2	72.059	+ 0 32 38.32	0.43	2	72.059				6598
5420	-22	1211	3.80	F8	42 22.192	0.02	124	71.404	-22 27 56.14	0.03	119	71.412	217	7197	1232	80217
5421	-65	492	8.5	K0	42 26.756	0.12	5	70.320	-65 09 05.22	0.34	5	70.320				18944
5422	-17	1230	8.7	F5	42 32.083	0.20	3	71.021	-17 26 20.48	0.30	2	70.988				6600
5423	-41	2037	8.2	K2	42 33.570	0.14	6	70.956	-41 07 35.15	0.17	4	70.875				683
5424*	+ 5	1006	8.9	G0	42 38.776	0.07	4	70.555	+ 5 55 49.04	0.18	4	70.555				25979
5425	-21	1252	6.68	B3	42 43.392	0.08	4	69.881	-21 40 44.11	0.10	4	69.881		7203		6601
5426*	+ 9	950	8.9	B9	42 48.027	0.08	4	71.457	+ 9 17 51.64	0.11	4	71.457				25981
5427	-53	925	9.0	G5	42 56.346	0.15	4	70.191	-53 23 49.97	0.10	4	70.191				6602
5428	- 1	1019	8.8	G0	42 56.673	0.23	2	70.592	- 1 38 01.71	0.03	2	70.592				6603
5429	-46	1977	9.0	K0	42 59.258	0.17	4	70.504	-46 13 52.70	0.07	4	70.504				684
5430	-70	439	9.1	G5	43 05.793	0.09	4	69.260	-70 24 11.66	0.15	4	69.260				18945
5431	-10	1274	8.4	A0	43 08.750	--	1	71.118	-10 47 07.59	--	1	71.118				6604
5432	-27	2472	8.0	F8	43 10.049	0.12	4	70.467	-27 00 48.17	0.08	4	70.467				6605
5433	-23	3055	8.7	K0	43 12.257	0.12	5	71.352	-23 38 56.88	0.16	5	71.352				6606
5434	-20	1177	8.6	K5	43 12.868	0.06	4	71.207	-20 06 32.79	0.11	4	71.207				6607
5435	-32	2531	8.3	K0	43 23.358	0.15	4	69.966	-32 38 00.77	0.17	4	69.966				6608
5436	-29	2459	8.9	G0	43 23.922	0.08	4	71.025	-29 55 47.35	0.06	4	71.025				6609
5437	-15	1154	8.0	F5	43 27.200	0.03	2	71.933	-15 53 17.12	0.27	2	71.933				6610
5438	-38	2200	8.8	K5	43 37.694	0.09	4	70.624	-38 42 29.84	0.12	4	70.624				6611
5439	-13	1239	8.3	F8	43 39.229	--	1	71.891	-13 13 22.95	--	1	71.891				6612
5440	-12	1260	7.9	K5	43 42.583	0.21	2	71.487	-12 26 30.54	0.32	2	71.487				6613
5441	-31	2711	8.3	F0	43 48.105	0.12	5	71.423	-31 32 02.08	0.14	4	71.009				6614
5442	-23	3068	8.0	K0	43 49.400	0.03	4	70.661	-23 09 30.28	0.10	4	70.661				6615
5443	-68	431	7.59	K0	43 49.538	0.18	4	70.287	-68 06 05.11	0.11	4	70.287		7223		18946
5444	-83	114	8.4	G0	43 57.417	0.15	4	69.429	-83 18 51.41	0.06	4	69.429				18947
5444 SP					43 57.217	0.18	4	70.341	-83 18 51.56	0.17	4	70.341				18947
5445	+ 1	1126	6.14	G5	43 59.963	0.01	2	72.048	+ 1 09 04.90	0.43	2	72.048		7226		6616
5446	-16	1235	8.6	K0	44 01.543	--	1	70.897	-15 58 15.46	--	1	70.897				6617
5447	+ 9	954	5.89	G5	44 07.295	0.10	7	71.346	+ 9 30 18.51	0.19	6	71.417	2432	7228	1234	32432
5448	-25	2654	8.7	K0	44 07.690	0.16	4	70.042	-25 53 43.24	0.08	4	70.042				6618
5449	-51	1609	9.2	M0	44 07.802	0.15	4	70.740	-51 46 05.55	0.10	4	70.740				685
5450	-78	201	8.9	K2	44 12.652	0.13	4	69.937	-78 39 08.88	0.12	4	69.937				18948
5450 SP					44 12.638	0.19	4	70.438	-78 39 08.68	0.43	4	70.438				18948
5451*	-47	2014	8.5	F5	44 13.345	0.04	4	70.374	-47 24 02.75	0.08	4	70.374				686
5452	- 8	1213	8.8	A0	44 14.495	0.03	3	72.070	- 8 50 47.15	0.15	2	72.058				6619
5453	+ 0	1178	8.8	F0	44 20.221	0.32	2	71.593	+ 0 57 01.27	--	1	71.047				6620
5454	-35	2502	8.9	K5	44 23.876	0.13	6	70.834	-35 24 54.05	0.15	5	70.981				6621
5455	+17	1004	5.51	F0	44 31.150	0.03	82	71.290	+17 42 43.63	0.04	80	71.282	218	7241	1238	80218
5456	-59	509	9.1	G5	44 34.963	0.12	5	71.202	-59 56 35.24	0.23	4	71.289				6622
5457	-21	1261	8.9	G0	44 35.343	0.07	4	70.497	-21 50 38.95	0.07	4	70.497				6623
5458	-65	496	4.52	A5	44 40.755	0.04	42	70.765	-65 45 15.03	0.06	41	70.766	1154	7246	1239	31154
5459	-14	1232	3.67	A2	44 41.281	0.05	18	71.754	-14 50 21.08	0.06	18	71.754	219	7247	1240	30219
5460	-16	1242	7.8	K0	44 44.901	--	1	71.888	-16 39 48.24	--	1	71.888				6624
5461	-10	1279	8.4	G0	44 45.034	--	1	71.899	-10 38 49.84	--	1	71.899				6625
5462	+13	979	5.20	B5	44 52.676	0.07	6	71.846	+13 52 58.83	0.14	5	71.981	2433	7249	1241	32433
5463	-28	2447	7.52	F5	44 55.852	0.08	4	70.646	-28 54 23.30	0.09	4	70.646		7253		6626
5464	+ 2	1063	8.0	K5	44 56.415	--	1	71.112	+ 2 53 23.91	--	1	71.112				6627
5465*	-25	2664	8.5	F8	44 57.568	0.13	4	70.804	-25 43 25.54	0.07	4	70.804				6628
5466	-46	1999	5.13	K0	45 04.164	0.12	6	70.950	-46 36 52.72	0.20	6	70.950	2434	7257		32434
5467	-77	215	8.8	K5	45 05.364	0.05	4	69.688	-77 28 18.62	0.20	4	69.688				18949
5467 SP					45 05.283	0.26	4	70.502	-77 28 18.08	0.15	4	70.502				18949
5468	-49	1879	8.5	G5	45 06.392	0.17	4	70.176	-49 17 57.00	0.08	4	70.176				687
5469	-15	1168	7.0	B9	45 11.853	0.14	2	72.108	-15 16 07.56	0.11	2	72.108				6629
5470	- 7	1172	8.9	G5	45 17.639	--	1	71.847	- 7 23 36.65	--	1	71.847				6630
5471	-43	2034	9.5	G5	45 19.501	0.14	4	70.509	-43 14 19.70	0.14	4	70.509				688
5472	-42	2142	8.0	K0	45 20.160	0.07	4	70.483	-42 10 04.56	0.30	4	70.483				689
5473	-52	781	9.0	K0	45 20.969	0.09	4	70.699	-52 20 28.20	0.09	4	70.699				6631
5474	- 9	1234	8.2	K0	45 22.802	0.06	2	72.121	- 9 32 14.32	0.09	2	72.121				6632
5475	- 9	1235	2.20	B0	45 23.025	0.05	9	70.748	- 9 41 09.46	0.08	9	70.748	220	7264	1242	30220
5476	-61	517	7.55	K0	45 28.927	0.06	5	70.685	-61 14 50.51	0.03	4	70.653		7269		6633
5477	- 0	1086	8.5	K0	45 37.365	--	1	71.940	- 0 45 53.05	--	1	71.940				6634
5478	-37	2396	8.9	G0	45 44.366	0.14	4	70.011	-37 46 48.51	0.25	4	70.011				6635
5479	-40	2079	8.3	K0	45 44.651	0.09	4	70.395	-40 20 16.38	0.13	4	70.395				690
5480	- 8	1219	7.12	B9	45 46.525	0.30	2	72.127	- 8 23 57.88	0.21	2	72.127		7278		6636
5481	-67	507	9.0	K0	45 53.381	0.21	4	70.770	-67 52 54.48	0.12	4	70.770				18950
5482	+24	970	5.02	K0	45 56.726	0.17	6	71.478	+24 33 08.92	0.22	6	71.478	2435	7283		32435
5483	-38	2219	8.6	A0	45 56.745	0.13	4	70.800	-38 00 37.13	0.12	4	70.800				6637
5484	-36	2459	8.2	K0	45 59.469	0.07	4	70.547	-36 41 14.44	0.08	4	70.547				6638
5485	- 4	1244	5.95	G5	46 05.867	0.03	36	70.839	- 4 06 29.30	0.04	34	70.764	1155	7286	1246	81155
5486	-30	2627	9.1	F5	46 08.715	0.17	4	68.668	-30 56 04.54	0.13	4	68.668				6639
5487	- 1	1030	7.8	K2	46 09.363	--	1	71.891	- 1 48 02.98	--	1	71.891				6640
5488	-13	1253	7.42	K0	46 09.571	--	1	71.968	-13 22 25.37	--	1	71.968		7288		6641
5489	-22	1234	7.6	K2	46 14.442	0.12	4	70.230	-22 04 07.09	0.03	4	70.230				6642

5424 A 4338AB, 9.2m-10.5m, 0°6, 62°.
 5426 A 4345AB, 9.0m-12.0m, 0°9, 233°.

5451 SDS, 8.8m-10.5m, 2°0, 303°.
 5465 A 4382, 9.0m-11.0m, 0°9, 260°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Deci 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
5490	-35	2518	8.29	K0	5 46 16.524	0.08	5	71.140	-35 20 44.12	0.20	5	71.140		7292		6643
5491	-24	3443	8.5	G0	46 16.751	0.13	4	70.797	-24 28 44.56	0.23	4	70.797				6644
5492	-9	1240	8.7	F8	46 16.859	0.18	2	72.543	-9 52 29.87	0.32	2	72.543				6645
5493	-33	2545	9.1	K5	46 22.762	0.10	4	70.832	-33 14 49.34	0.09	4	70.832				6646
5494	+4	1048	8.2	B9	46 29.149	--	1	71.104	+4 11 51.36	--	1	71.104				6647
5495	-50	1941	9.2	G5	5 46 31.955	0.13	5	70.865	-50 03 34.08	0.12	5	70.865				691
5496	-48	1987	9.5	K0	46 45.162	0.13	4	70.496	-48 17 31.34	0.15	3	70.629				692
5497	-56	939	8.5	K5	46 46.154	0.09	4	70.970	-56 49 55.10	0.16	3	71.009				6648
5498	-64	477	8.7	G0	46 52.460	0.05	4	70.477	-64 46 40.59	0.44	4	70.477				18951
5499	-18	1196	8.6	K2	46 54.033	--	1	70.891	-18 04 14.75	--	1	70.891				6649
5500	-20	1193	8.8	K0	5 46 58.620	0.15	4	70.727	-20 06 52.06	0.09	4	70.727				6650
5501	-32	2569	7.47	G5	47 00.142	0.13	4	70.206	-32 26 28.67	0.03	4	70.206		7310		6651
5502	-39	2197	8.8	K2	47 00.574	0.09	5	71.311	-39 17 34.91	0.13	5	71.311				6652
5503	-19	1278	7.26	A0	47 02.263	0.15	2	70.513	-19 24 52.00	0.14	2	70.513			1248	6653
5504	-28	2476	8.2	K5	47 07.526	0.16	4	70.720	-28 23 38.73	0.11	4	70.720				6654
5505	+15	945	8.7	B9	5 47 09.399	0.11	4	70.018	+15 59 58.05	0.14	4	70.018				25993
5506	-4	1251	8.5	G5	47 10.750	0.25	2	72.513	-4 28 13.66	0.09	2	72.513				6655
5507	-31	2757	7.8	F2	47 11.454	0.09	4	70.167	-31 42 23.60	0.15	4	70.167				6656
5508	-12	1281	8.8	K5	47 12.798	--	1	71.853	-12 14 20.86	--	1	71.853				6657
5509	+0	1187	8.6	B9	47 24.506	0.08	2	72.481	+0 08 22.32	0.05	2	72.481				6658
5510	-34	2469	8.6	K2	5 47 27.541	0.13	4	70.553	-34 34 29.88	0.11	4	70.553				6659
5511	-74	354	9.2	G0	47 28.605	0.25	4	71.218	-74 03 55.37	0.14	4	71.218				18952
5512	-46	2024	7.73	A3	47 31.684	0.21	4	70.475	-46 19 48.38	0.17	4	70.475		7318		693
5513	+4	1052	6.12	K0	47 34.154	0.10	4	70.758	+4 24 36.56	0.14	4	70.758	2439	7320		32439
5514	-5	1417	8.0	G5	47 36.453	0.04	2	71.020	-5 54 41.40	0.31	2	71.020				6660
5515	-28	2485	8.8	K0	5 47 42.043	0.19	4	70.965	-28 34 50.13	0.26	4	70.965				6661
5516	-20	1203	8.4	K0	47 47.028	0.12	4	71.243	-20 21 24.86	0.28	4	71.243				6662
5517*	+8	1087	8.7	B9	47 49.085	--	1	72.840	+8 11 32.51	--	1	72.840				25994
5518	-53	943	8.4	G5	47 52.651	0.05	4	70.693	-53 28 36.23	0.15	4	70.693				6663
5519	+1	1148	6.26	*	47 53.932	--	1	72.810	+2 00 41.81	--	1	72.810		7328	1249	6664
5520	-44	2271	8.18	K0	5 47 54.643	0.17	4	70.964	-44 41 47.72	0.21	4	70.964		7329		694
5521	-79	198	9.0	K5	47 55.527	0.03	4	70.013	-79 19 27.96	0.09	4	70.013				18953
5521 SP					47 55.384	0.21	4	70.455	-79 19 27.72	0.28	4	70.455				18953
5522	-27	2529	8.5	K0	47 58.664	0.11	5	71.098	-27 34 14.07	0.23	5	71.098				6665
5523	+1	1149	8.3	K2	48 02.651	0.19	2	72.002	+1 41 11.93	0.27	2	72.002				6666
5524	-41	2087	9.0	K5	5 48 03.756	0.01	4	70.886	-41 03 23.37	0.16	4	70.886				695
5525	-60	482	8.8	K0	48 06.042	0.09	4	70.791	-60 19 52.31	0.12	4	70.791				6667
5526	-24	3473	8.7	K2	48 09.778	0.07	4	71.468	-24 07 26.44	0.17	4	71.468				6668
5527	-71	380	9.0	G0	48 14.181	0.09	4	70.901	-71 00 13.49	0.11	4	70.901				18954
5528	-66	457	7.9	K0	48 19.531	0.16	4	70.601	-66 38 46.27	0.11	4	70.601				18955
5529	-17	1263	8.7	K5	5 48 28.224	--	1	71.938	-17 08 29.77	--	1	71.938				6669
5530	-58	573	9.3	K0	48 34.393	0.18	5	71.182	-58 41 04.62	0.09	5	71.182				6670
5531	-54	903	9.0	G5	48 37.650	0.13	4	70.789	-54 55 27.90	0.33	4	70.789				6671
5532	-55	883	9.1	G3	48 40.549	0.15	4	71.524	-55 24 32.16	0.12	4	71.524				6672
5533	-72	418	6.51	K0	48 48.849	0.07	6	69.557	-72 43 00.19	0.14	6	69.557	2441	7351		32441
5533 SP					5 48 48.800	0.12	14	70.803	-72 42 59.80	0.23	12	70.728	2441	7351		52441
5534	+3	1058	8.4	A0	48 49.704	0.07	2	71.974	+3 45 43.70	--	1	71.853				6673
5535	-56	946	4.38	K0	48 55.242	0.06	24	71.312	-56 10 44.33	0.09	22	71.342	1156	7353	1252	31156
5536	-7	1187	5.32	B3	48 57.068	0.08	7	72.512	-7 31 47.80	0.15	6	72.583	2442	7354		32442
5537	-2	1391	8.5	K0	48 57.631	0.11	2	70.558	-2 55 44.41	0.09	2	70.558				6674
5538	-25	2722	8.5	A2	5 48 58.164	0.03	4	70.488	-25 53 12.15	0.20	4	70.488				6675
5539	-60	487	7.48	K2	49 01.552	0.06	4	70.673	-60 41 21.51	0.16	4	70.673		7356		6676
5540*	-59	522	8.8	G0	49 02.403	0.18	5	71.418	-59 51 09.47	0.20	4	71.003				6677
5541	-63	486	9.2	K5	49 07.240	0.14	3	71.607	-63 02 03.04	0.04	3	71.607				6678
5542	-20	1211	3.90	K0	49 10.542	0.04	33	70.864	-20 53 08.55	0.05	33	70.864	222	7362	1253	30222
5543	-35	2546	3.22	K0	5 49 11.819	0.05	24	70.767	-35 47 01.29	0.07	23	70.707	223	7364	1254	30223
5544	-6	1335	8.8	A2	49 19.990	0.00	2	71.604	-6 49 03.96	0.60	2	71.604				6679
5545	-10	1303	8.0	K5	49 23.780	0.05	2	71.417	-10 26 54.39	0.16	2	71.417				6680
5546	-45	2194	9.5	K0	49 27.573	0.18	4	70.921	-45 45 23.81	0.22	4	70.921				696
5547	-20	1213	8.7	G5	49 28.440	0.06	4	69.870	-20 50 53.82	0.05	4	69.870		7373		6681
5548	-52	794	4.98	K0	5 49 45.269	0.04	60	71.145	-52 07 12.15	0.05	59	71.150	1159	7377	1255	31159
5549	-42	2185	9.0	G5	49 47.653	0.17	5	71.038	-41 58 23.56	0.10	4	71.273				697
5550	-46	2046	8.8	K0	49 50.475	0.08	4	70.265	-46 21 24.74	0.12	4	70.265				698
5551	+1	1151	5.01	K0	49 50.557	0.11	6	70.610	+1 50 40.00	0.16	6	70.610	2444	7380		32444
5552	-50	1960	8.5	K0	49 57.656	0.12	4	70.793	-50 16 06.20	0.13	4	70.793				699
5553	-2	1395	7.8	F5	5 49 58.565	0.03	2	70.487	-2 17 45.54	0.18	2	70.487				6682
5554	-44	2292	8.9	K0	50 00.343	0.07	4	70.755	-44 32 21.88	0.06	4	70.755				700
5555	-29	2556	6.49	K0	50 03.545	0.08	4	69.756	-29 27 36.99	0.10	4	69.756		7385		6683
5556	-25	2734	6.87	G5	50 06.000	0.12	6	70.098	-25 57 16.00	0.12	6	70.098	2445	7387	1258	32445
5557	+2	1080	8.9	A5	50 06.796	0.31	2	71.487	+2 24 24.62	0.14	2	71.487				6684
5558	-76	356	8.5	K0	5 50 07.317	0.13	4	70.410	-76 06 58.09	0.08	4	70.410				18956
5558 SP					50 07.317	0.14	4	71.046	-76 06 58.46	0.19	4	71.046				18956
5559	+27	899	4.54	A0	50 10.985	0.06	22	71.631	+27 36 08.18	0.09	20	71.644	1158	7389	1259	31158
5560	-14	1267	7.8	G5	50 16.054	0.26	2	70.480	-14 34 03.05	0.21	2	70.480				6685
5561	-63	491	8.8	F5	50 16.385	0.17	5	71.364	-63 35 33.80	0.19	5	71.364				6686

5517 A 4438AB, 9.0m-11.3m, 0^m.5, 310°.
5519 G0+A0.

5540 SDS, 9.7m, 2^m.5, 191°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch α	Decl	1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
5562	+ 3	1065	8.1	G5	5	50	20.761	0.10	2	70.510	+ 3	02 18.70	0.32	2	70.510		7398		6687
5563	-69	530	8.84	K5		50	25.860	0.10	4	70.532	-69	41 48.73	0.11	4	70.532		7400		18957
5564	-76	357	9.1	K5		50	35.734	0.08	5	70.387	-76	33 21.51	0.07	4	70.459				18958
5564	SP					50	35.695	0.36	4	70.572	-76	33 20.87	1.13	4	70.572				18958
5565	-24	3513	8.5	K0		50	52.851	0.06	4	69.954	-24	26 51.26	0.10	4	69.954				6688
5566	-68	442	8.7	K5	5	50	55.352	0.12	4	69.977	-68	26 32.87	0.13	4	69.977				18959
5567	-36	2506	8.7	M0		50	55.518	0.13	4	70.220	-36	43 29.26	0.17	4	70.220				6689
5568	- 8	1243	8.5	K2		50	58.414	0.12	3	70.907	- 8	07 16.40	0.10	2	71.312				6690
5569	-32	2614	7.8	G5		50	58.820	0.21	4	70.431	-32	20 57.01	0.10	4	70.431				6691
5570	-37	2460	9.1	K2		51	00.688	0.15	5	71.017	-37	40 51.43	0.08	4	70.748				6692
5571	-43	2104	9.0	G5	5	51	02.342	0.18	4	70.755	-43	06 55.00	0.16	4	70.755				701
5572	-10	1309	8.9	A0		51	04.276	0.17	2	70.498	-10	41 16.43	-	1	70.140				6693
5573	-30	2685	7.8	K5		51	06.958	0.08	4	69.461	-30	34 52.79	0.08	4	69.461				6694
5574	- 5	1434	6.80	B9		51	14.646	0.02	2	71.440	- 5	42 49.63	0.10	2	71.440		7414		6695
5575	-40	2131	8.5	K5		51	14.650	0.08	4	70.421	-40	48 00.52	0.21	4	70.421				702
5576	-22	1256	8.5	B9	5	51	15.129	0.10	4	70.172	-22	22 50.97	0.11	4	70.172				6696
5577	-16	1292	8.0	G0		51	16.697	0.14	2	71.439	-16	16 24.90	0.12	2	71.439				6697
5578	-39	2241	8.2	K2		51	28.271	0.20	4	69.990	-39	31 59.70	0.12	4	69.990				6698
5579	-12	1304	7.5	K0		51	35.504	0.10	2	71.413	-12	24 11.60	0.23	2	71.413				6699
5580	-57	903	8.70	G5		51	39.704	0.08	4	69.168	-57	54 41.05	0.19	4	69.168		7424		6700
5581	-35	2574	9.1	K0	5	51	44.425	0.20	4	69.904	-35	50 04.35	0.15	4	69.904				6701
5582	-19	1293	6.46	A0		51	47.702	0.27	2	71.462	-19	38 50.78	0.42	2	71.462		7429		6702
5583	-31	2811	8.8	K5		51	50.011	0.15	4	69.243	-31	41 40.47	0.21	4	69.243				6704
5584	- 1	1059	8.4	M0		51	50.033	0.51	2	71.468	- 1	05 06.06	0.18	2	71.468				6703
5585	+19	1126	5.89	B2		51	58.963	0.14	6	70.459	+19	44 29.89	0.15	6	70.459	2447	7436		32447
5586	-51	1663	9.0	K2	5	52	09.075	0.11	5	70.314	-51	03 43.02	0.06	5	70.314				703
5587	- 3	1230	8.3	F5		52	11.091	0.05	2	70.470	- 3	29 26.05	0.04	2	70.470				6705
5588	-17	1284	8.3	K0		52	15.958	0.03	2	71.353	-17	46 44.27	0.21	2	71.353				6706
5589*	+ 6	1065	8.9	F5		52	19.058	0.08	3	70.200	+ 6	12 54.09	0.05	3	70.200				26005
5590	+ 0	1211	9.0	K0		52	22.739	0.10	2	70.520	+ 0	34 11.20	0.07	2	70.520				6707
5591	-48	2031	8.5	G5	5	52	27.091	0.08	4	69.940	-48	07 00.35	0.16	4	69.940				704
5592	+ 7	1055	0.1v	M0		52	27.840	0.03	62	71.855	+ 7	23 58.05	0.05	60	71.864	224	7451	1266	30224
5593	-25	2772	8.5	K5		52	31.595	0.10	4	69.182	-25	15 42.70	0.21	4	69.182				6708
5594	-67	521	9.1	K5		52	36.424	0.11	4	69.692	-67	34 51.95	0.16	4	69.692				18960
5595	-26	2558	6.81	A3		52	38.994	0.08	4	69.878	-26	40 06.35	0.11	4	69.878		7454		6709
5596	-82	136	8.5	A2	5	52	40.586	0.08	4	69.492	-82	26 26.97	0.14	4	69.492				18961
5596	SP					52	40.587	0.20	4	70.351	-82	26 26.74	0.20	4	70.351				18961
5597	- 9	1264	7.5	F2		52	45.038	0.16	2	70.540	- 9	49 03.27	0.08	2	70.540				6710
5598	- 4	1286	8.4	K0		52	47.261	0.03	2	71.943	- 4	03 39.78	0.09	2	71.943				6711
5599	-47	2085	7.37	K0		52	50.627	0.10	5	70.363	-47	11 35.93	0.16	4	70.429		7456		705
5600	-84	85	7.97	A5	5	52	54.056	0.14	4	69.946	-84	54 56.48	0.15	4	69.946		7459		18962
5600	SP					52	54.100	0.12	4	71.094	-84	54 56.31	0.11	4	71.094		7459		18962
5601	-55	902	8.5	M0		52	56.339	0.14	4	70.257	-55	06 05.91	0.06	4	70.257				6712
5602	- 4	1288	7.10	A0		52	56.819	0.10	3	71.362	- 4	49 56.99	0.03	2	71.995		7461	1267	6713
5603	-85	77	6.74	K0		53	01.983	0.02	147	71.180	-85	55 50.86	0.03	141	71.173	1660	7464	1268	61660
5603	SP				5	53	01.988	0.03	115	71.192	-85	55 50.74	0.05	113	71.160	1660	7464	1268	71660
5604	-33	2623	7.8	K0		53	07.905	0.06	4	70.195	-33	40 22.92	0.13	4	70.195				6714
5605	-38	2286	8.2	K5		53	12.938	0.15	4	70.424	-38	15 15.00	0.16	4	70.424				6715
5606	- 7	1221	8.7	A0		53	13.149	0.13	2	70.470	- 7	28 20.95	0.52	2	70.470				6716
5607	-64	493	8.4	K0		53	13.660	0.08	4	70.183	-64	40 35.23	0.08	4	70.183				18963
5608	-39	2260	5.63	K5	5	53	14.736	0.09	7	71.698	-39	57 55.09	0.08	6	71.828	2449	7471		32449
5609	-49	1945	6.16	B5		53	25.952	0.19	6	71.368	-49	38 03.48	0.16	6	71.368	2450	7473		32450
5610	-16	1301	8.7	G5		53	32.631	0.27	2	72.102	-16	49 17.02	0.12	2	72.102				6717
5611	+ 3	1077	8.8	F5		53	36.226	-	1	71.837	+ 3	51 39.61	-	1	71.837				6718
5612	-79	202	5.56	B8		53	38.760	0.08	6	70.656	-79	22 17.99	0.15	6	70.656	2451	7476		32451
5612	SP				5	53	38.794	0.09	6	69.400	-79	22 17.76	0.29	6	69.400	2451	7476		52451
5613	-29	2615	8.5	K0		53	42.882	0.07	4	69.254	-29	58 24.33	0.10	4	69.254				6719
5614	-63	498	4.53	K0		53	43.430	0.09	6	72.132	-63	06 05.16	0.07	6	72.132	2452	7477		32452
5615	-19	1301	8.8	A3		53	43.932	0.15	3	72.446	-19	09 59.37	0.16	2	72.129				6720
5616*	+ 3	1078	9.1	G0		53	49.600	-	1	69.995	+ 3	54 40.21	-	1	69.995				26012
5617	-15	1221	7.8	G5	5	53	54.358	0.06	2	71.936	-15	31 42.27	0.04	2	71.936				6721
5618	-45	2226	9.0	K0		53	54.756	0.11	4	69.733	-45	35 05.61	0.08	4	69.733				706
5619	-53	965	8.6	K2		53	56.056	0.09	5	70.160	-53	32 03.83	0.10	4	69.996				6722
5620	-49	1949	8.5	K0		53	59.741	0.08	4	70.415	-49	38 43.00	0.16	4	70.415				707
5621	+11	975	6.08	G5		54	01.887	0.09	4	70.924	+11	30 57.13	0.21	4	70.924	2453	7488	1270	32453
5622	-21	1307	6.96	A0	5	54	02.704	0.08	4	69.466	-21	07 43.60	0.08	4	69.466		7490		6723
5623	-17	1300	8.2	F0		54	04.477	0.05	2	72.494	-17	14 44.78	0.25	2	72.494				6724
5624	-22	1268	8.5	F8		54	05.480	0.07	4	70.328	-22	16 23.90	0.23	4	70.328				6725
5625	-14	1286	3.77	F0		54	07.506	0.02	104	70.641	-14	10 28.52	0.03	100	70.644	226	7492	1271	80226
5626	-24	3557	7.6	K5		54	14.395	0.12	4	70.447	-24	05 40.63	0.12	4	70.447				6726
5627	-34	2543	8.7	K5	5	54	18.674	0.08	5	70.977	-34	15 39.54	0.08	4	70.697				6727
5628	-13	1306	7.8	F8		54	25.955	-	1	70.905	-13	09 49.52	-	1	70.905				6728
5629	- 9	1274	8.7	G5		54	26.157	-	1	71.050	- 9	19 11.50	-	1	71.050				6729
5630	-31	2848	5.54	F0		54	27.936	0.10	6	72.151	-31	23 17.18	0.19	6	72.151	2454	7499	1272	32454
5631	-11	1333	8.7	G5		54	28.100	0.17	3	72.									

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
5632	- 2	1416	8.5	F0	54 29.717	0.14	2	71.536	- 2 10' 18.58"	0.20	2	71.536				6731
5633	+ 3	1080	8.8	K0	54 50.738	0.22	3	71.318	+ 3 31 59.39	0.13	2	71.929				6732
5634*	+ 0	1230	8.6	A	54 53.393	0.05	4	70.925	+ 0 23 41.93	0.08	4	70.925				26018
5635	-65	524	8.6	G0	54 53.517	0.18	4	70.011	-65 57 59.98	0.17	4	70.011				18964
5636	- 2	1420	8.5	F0	55 03.345	0.16	2	70.562	- 2 38 58.53	0.09	2	70.562				6733
5637	- 6	1359	7.57	M0	5 55 14.825	0.01	2	70.618	- 6 05 56.83	0.08	2	70.618		7515		6734
5638	-54	920	8.4	K0	55 15.417	0.19	4	70.184	-54 10 18.76	0.08	4	70.184				6735
5639	-28	2592	8.5	G5	55 18.485	0.14	4	70.677	-28 26 40.90	0.18	4	70.677				6736
5640	+ 1	1168	6.49	K2	55 19.368	0.01	2	72.073	+ 1 13 12.48	0.16	2	72.073		7517		6737
5641	-27	2620	8.34	G5	55 19.724	0.09	4	70.536	-27 20 08.80	0.08	4	70.536		7518		6738
5642	+16	935	8.5	G0	5 55 19.877	0.12	5	71.165	+16 05 53.01	0.14	4	71.227				26020
5643	-51	1681	8.5	K5	55 25.845	0.07	4	71.013	-51 39 27.83	0.16	4	71.013				708
5644	-27	2624	8.6	G5	55 29.760	0.13	4	70.417	-27 46 08.28	0.14	4	70.417				6739
5645	-14	1292	8.0	K2	55 30.113	0.02	2	72.100	-14 12 48.16	0.14	2	72.100		7524		6740
5646	- 4	1305	8.5	K0	55 33.301	0.21	4	72.811	- 4 46 31.15	0.44	3	72.721				6741
5647	-19	1314	7.8	K2	5 55 33.982	0.03	2	72.498	-19 23 27.72	0.00	2	72.498				6742
5648	-61	552	8.32	F0	55 36.297	0.27	4	70.545	-61 27 09.94	0.13	4	70.545		7528		6743
5649	-35	2612	4.36	B3	55 45.755	0.04	48	71.346	-35 17 14.83	0.04	47	71.372	1160	7536	1277	31160
5650	-56	976	8.7	K	55 49.723	0.18	4	70.795	-56 07 30.06	0.18	4	70.795				6744
5651	-29	2642	8.5	K0	55 50.349	0.29	5	70.607	-29 11 13.08	0.12	5	70.607				6745
5652	-40	2178	9.5	G5	5 55 50.744	0.11	4	70.444	-40 54 15.52	0.08	4	70.444				709
5653	- 4	1310	6.85	G0	55 53.100	0.07	2	71.515	- 4 39 09.18	0.08	2	71.515		7544		6746
5654	-18	1254	8.4	K0	56 02.818	0.11	2	71.567	-17 59 26.35	0.14	2	71.567				6747
5655	-31	2871	7.4	K2	56 04.362	0.08	4	69.710	-31 55 29.18	0.10	4	69.710				6748
5656	-72	437	7.7	G5	56 07.132	0.08	4	70.436	-72 49 10.87	0.06	4	70.436				18965
5657	-59	554	8.8	M5	5 56 07.330	0.15	5	71.017	-59 25 38.08	0.12	5	71.017				6749
5658	-10	1332	8.1	B9	56 09.980	0.03	2	71.540	-10 50 34.92	0.01	2	71.540				6750
5659	+ 0	1239	5.25	A0	56 15.211	0.03	51	71.873	+ 0 32 59.79	0.04	50	71.869	1161	7556	1279	31161
5660	-11	1345	8.8	A0	56 16.638	0.01	2	70.495	-11 02 48.88	0.05	2	70.495				6751
5661	-26	2612	8.4	K0	56 17.982	0.17	4	69.885	-26 12 30.87	0.08	4	69.885				6752
5662	-35	2620	8.3	G0	5 56 18.176	0.07	5	70.987	-35 48 12.08	0.18	4	70.699				6753
5663	-43	2159	8.5	K5	56 19.267	0.09	4	70.535	-43 36 18.90	0.26	4	70.535				710
5664	-73	344	7.7	K0	56 20.484	0.08	5	70.749	-73 09 21.32	0.15	4	70.664				18966
5665	-48	2071	8.0	M0	56 23.814	0.13	5	71.023	-48 15 36.60	0.15	4	70.755				711
5666	+13	1065	8.2	B9	56 32.433	0.10	4	70.061	+13 43 58.40	0.04	3	69.692				26024
5667	-52	813	8.60	K0	5 56 41.282	0.27	4	69.712	-52 38 17.46	0.19	4	69.712		7564		6754
5668	- 9	1285	5.10	A5	56 41.815	0.10	6	70.771	- 9 33 37.71	0.13	6	70.771	2455	7565	1281	32455
5669	-32	2684	9.2	F5	56 42.754	0.14	4	70.735	-32 47 02.99	0.10	4	70.735				6755
5670	-66	478	8.2	K0	56 52.029	0.15	5	70.611	-66 18 51.60	0.23	4	70.560				18967
5671	+ 2	1102	7.79	F5	56 53.284	0.17	3	70.928	+ 2 28 25.91	0.09	2	71.343			1282	6756
5672	-35	2625	8.9	F8	5 56 53.677	0.09	4	70.908	-35 00 46.50	0.21	4	70.908				6757
5673	-70	475	9.0	K0	57 05.786	0.15	4	70.048	-70 17 36.55	0.24	4	70.048				18968
5674	-38	2333	8.7	K0	57 09.740	0.12	4	70.578	-38 04 34.58	0.07	4	70.578				6758
5675	-37	2519	8.0	G5	57 12.625	0.10	4	70.539	-36 59 47.47	0.11	4	70.539				6759
5676	-22	2643	8.6	K0	57 14.777	0.20	4	69.247	-23 00 09.02	0.15	4	69.247				6760
5677	- 8	1276	8.3	K0	5 57 15.980	0.10	2	70.506	- 8 02 51.44	0.17	2	70.506				6761
5678	+ 0	1242	8.8	F5	57 17.745	0.12	2	70.522	+ 0 03 16.05	0.08	2	70.522				6762
5679	-16	1320	7.6	F2	57 23.719	0.18	2	71.517	-16 47 17.74	0.12	2	71.517				6763
5680	+ 4	1096	8.8	A0	57 25.687	0.16	2	71.438	+ 4 13 16.03	0.30	2	71.438				6764
5681	+16	957	6.75	K2	57 31.004	0.05	8	71.061	+16 17 52.09	0.22	6	70.914	2456	7586		32456
5682	- 3	1256	4.68	K0	5 57 33.178	0.09	6	71.642	- 3 04 30.45	0.17	6	71.642	2457	7587		32457
5683	+ 4	1097	7.55	G0	57 34.503	0.26	2	71.550	+ 4 49 58.97	0.17	2	71.550				6765
5684	- 0	1137	7.7	B9	57 34.662	0.21	2	71.457	- 0 30 11.59	0.06	2	71.457				6766
5685	-42	2266	4.03	K0	57 36.907	0.03	54	71.318	-42 49 01.24	0.06	54	71.318	229	7591	1286	30229
5686	-41	2164	9.2	G5	57 37.711	0.06	4	70.753	-41 44 54.46	0.05	4	70.753				712
5687	-62	552	9.1	K0	5 57 50.512	0.09	4	69.505	-62 45 26.53	0.07	4	69.505				6767
5688	-19	1323	8.7	F2	57 50.817	0.06	2	71.556	-19 50 59.28	0.56	2	71.556				6768
5689	-35	2631	7.01	K0	57 52.498	0.12	4	70.427	-35 21 16.17	0.09	4	70.427		7599		6769
5690	-21	1321	8.3	K0	57 52.743	0.03	4	69.162	-21 24 56.01	0.20	4	69.162				6770
5691	-33	2665	9.3	K0	57 57.501	0.11	4	70.981	-33 37 01.72	0.10	4	70.981				6771
5692	- 7	1248	7.30	K0	5 58 06.216	0.19	2	71.530	- 7 28 13.49	0.29	2	71.530		7602		6772
5693	-47	2129	9.0	K0	58 07.233	0.11	4	70.655	-47 52 28.80	0.03	4	70.655				713
5694	-39	2312	8.33	K0	58 08.694	0.10	5	70.982	-39 14 11.39	0.18	4	70.704		7603		6773
5695	+ 2	1106	7.2	G5	58 12.204	0.13	2	71.391	+ 2 54 55.67	0.13	2	71.391				6774
5696	- 3	1260	8.3	A0	58 16.535	0.21	2	71.468	- 3 53 46.96	-	1	72.079				6775
5697	-10	1341	8.7	M0	5 58 19.696	0.09	2	71.545	-10 01 39.53	0.14	2	71.545				6776
5698	-45	2265	9.5	F0	58 23.470	0.13	5	71.036	-45 17 32.14	0.16	4	70.760				714
5699	-50	2013	9.2	G5	58 25.176	0.51	6	70.143	-50 18 37.41	0.37	5	69.954				715
5700*	+ 7	1092	8.5	A3	58 26.634	0.13	4	70.487	+ 7 06 29.07	0.14	4	70.487				26030
5701	-15	1242	7.5	G5	58 31.991	0.17	2	70.480	-15 00 11.93	0.08	2	70.480				6777
5702	-37	2536	8.3	K0	5 58 32.388	0.11	4	70.410	-37 37 02.11	0.21	4	70.410				6778
5703	-30	2764	8.7	K5	58 40.572	0.15	4	68.929	-30 05 04.31	0.07	4	68.929				6779
5704	+ 1	1185	8.6	K0	58 49.396	0.13	3	70.979	+ 1 54 59.17	0.07	2	71.420				6780
5705	-42	2275	9.4	F5	58 53.931	0.08	4	70.577	-42 28 33.41	0.07	4	70.577				716
5706	-24	3615	8.7	A0	59 01.054	0.11	4	69.438	-24 05 42.63	0.07	4	69.438				6781

5634 A 4541AB, 9.3m-10.3m, 0.2, 322°.

5700 A 4595AB, 9.0m-10.5m, 0.7, 12°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
5707	-13	1321	8.1	K0	5 59 02.067	0.04	2	70.518	-13 01 35.74	0.20	2	70.518				6782
5708	-71	404	8.20	K0	59 03.192	0.11	4	69.199	-71 19 38.69	0.09	4	69.199		7619		18969
5709	-52	824	9.0	K2	59 03.273	0.17	4	69.931	-52 10 41.84	0.14	4	69.931				6783
5710	-25	2865	8.90	A0	59 11.135	0.12	6	70.464	-25 25 02.53	0.11	6	70.464	2460	7623	1293	32460
5711	-1	1092	8.0	K0	59 12.955	0.11	2	70.525	-1 40 39.81	0.07	2	70.525		7624		6784
5712	-44	2382	9.0	G5	5 59 14.071	0.08	5	70.386	-44 53 50.91	0.13	4	70.458				717
5713	-3	1265	8.0	A2	59 21.769	0.25	2	70.503	-3 40 50.17	0.17	2	70.503			1294	6785
5714	-15	1249	6.80	K0	59 24.137	0.13	2	70.513	-15 35 18.60	0.15	2	70.513		7629		6786
5715	-62	558	8.3	F5	59 30.410	0.13	4	69.641	-62 48 33.97	0.11	4	69.641				6787
5716	-54	939	8.7	K5	59 37.158	0.14	5	69.907	-54 41 27.62	0.21	4	69.680				6788
5717	-25	2874	8.7	G5	5 59 45.790	0.14	4	69.242	-25 50 14.53	0.13	4	69.242				6789
5718	-58	602	7.21	A0	59 49.336	0.06	6	70.330	-58 06 07.50	0.12	6	70.330	2462	7644	1297	32462
5719	-40	2208	9.0	G5	6 00 02.084	0.18	4	69.720	-40 08 09.51	0.16	4	69.720				718
5720	-20	1261	8.3	K2	6 00 05.820	0.13	4	69.731	-20 01 10.00	0.04	4	69.731				6790
5721	-27	2680	7.17	F5	6 00 07.420	0.12	4	69.488	-27 25 30.39	0.10	4	69.488		7654		6791
5722	-2	1455	8.0	F5	6 00 09.497	0.13	2	70.531	-2 50 19.02	0.26	2	70.531				6792
5723	-10	1355	9.1	F8	6 00 15.117	0.09	4	71.139	-10 25 32.74	0.17	4	71.139				26040
5724	-57	934	8.7	K0	6 00 18.696	0.27	4	70.065	-57 47 00.12	0.10	4	70.065				6793
5725	-49	2011	8.5	K0	6 00 22.122	0.14	4	69.948	-49 05 02.28	0.21	4	69.948				719
5726	-5	1480	8.5	K5	6 00 22.515	0.05	2	71.326	-5 03 21.37	--	1	71.796				6794
5727*	+ 9	1071	8.6	G5	6 00 22.645	0.06	5	70.205	+ 9 01 36.35	0.06	4	70.027				26041
5728	-25	2880	8.7	G0	6 00 26.533	0.09	4	70.192	-25 14 04.15	0.11	4	70.192				6795
5729	+11	1007	7.9	B9	6 00 30.796	0.12	4	69.198	+11 08 17.69	0.22	4	69.198				26042
5730	-55	928	9.0	K5	6 00 37.044	0.12	4	70.242	-55 46 56.17	0.15	4	70.242				6796
5731	-2	1457	8.7	K0	6 00 38.927	0.04	2	71.545	-2 04 01.81	0.40	2	71.545				6797
5732	-0	1150	8.4	K0	6 00 41.627	0.05	2	71.522	-0 35 57.56	0.19	2	71.522				6798
5733	-11	1366	8.4	A0	6 00 45.314	0.07	2	71.514	-11 53 20.59	0.15	2	71.514				6799
5734	-63	511	8.4	K5	6 00 46.960	0.05	4	70.248	-63 43 44.47	0.12	4	70.248				6800
5735	-17	1339	8.7	G0	6 00 51.849	0.26	2	71.615	-17 47 56.25	0.15	2	71.615				6801
5736	-29	2719	8.0	K0	6 00 52.476	0.07	4	70.617	-29 59 41.70	0.06	4	70.617				6802
5737	-46	2154	9.2	K5	6 00 53.424	0.13	4	69.941	-46 13 29.22	0.14	4	69.941				720
5738	-6	1387	8.2	K5	6 01 00.544	0.05	2	71.942	-6 23 31.10	0.04	2	71.942				6803
5739	+23	1170	4.30	G5	6 01 04.761	0.03	89	71.456	+23 16 02.35	0.04	85	71.464	1163	7676	1300	81163
5740*	+ 1	1205	8.9	K2	6 01 07.021	0.13	4	70.407	+ 1 20 14.44	0.14	4	70.407				26048
5741	+19	1191	8.9	A5	6 01 10.043	0.15	4	70.488	+19 15 11.99	0.16	4	70.488				26049
5742	-21	1336	7.4	F0	6 01 17.915	0.06	4	70.491	-21 47 12.57	0.15	4	70.491				6804
5743	-77	230	9.0	K2	6 01 21.488	0.09	4	69.973	-77 36 01.95	0.12	4	69.973				18970
5743 SP					6 01 21.489	0.15	4	70.561	-77 36 01.57	0.27	4	70.561				18970
5744	-22	1304	8.3	K2	6 01 23.703	0.23	4	70.397	-22 48 49.09	0.13	4	70.397				6805
5745	-32	2732	8.8	K0	6 01 26.320	0.07	4	69.985	-32 04 36.74	0.04	4	69.985				6806
5746	-58	609	8.0	K2	6 01 28.909	0.07	4	70.401	-58 13 09.27	0.03	4	70.401				6807
5747	-37	2566	9.1	F8	6 01 31.240	0.08	4	70.538	-37 57 36.97	0.14	4	70.538				6808
5748	-48	2108	8.7	K0	6 01 41.182	0.05	4	70.781	-48 18 38.17	0.03	4	70.781				721
5749	-53	999	6.98	K0	6 01 45.031	0.09	4	70.583	-53 34 48.14	0.33	4	70.583		7690		6809
5750	+ 4	1113	8.6	K0	6 01 47.388	0.01	2	70.612	+ 4 47 22.90	0.36	2	70.612				6810
5751	-56	996	7.99	K5	6 01 51.814	0.15	4	70.069	-56 56 25.51	0.20	4	70.069		7692		6811
5752	-31	2946	9.2	K2	6 01 53.061	0.04	4	69.659	-31 00 53.71	0.14	4	69.659				6812
5753	-67	546	9.3	K	6 01 53.902	0.14	6	71.493	-67 51 44.50	0.11	5	71.363				18971
5754	-3	1281	9.0	K0	6 01 59.507	0.14	2	71.595	-3 04 02.88	0.03	2	71.595				6813
5755	-1	1104	6.82	A0	6 02 10.968	0.12	2	72.035	-1 34 34.39	0.11	2	72.035		7699		6814
5756	-10	1361	8.8	K0	6 02 12.173	--	1	71.817	-10 02 46.98	--	1	71.817				6815
5757	-86	79	8.3	G5	6 02 13.258	0.21	4	69.196	-86 54 38.40	0.22	4	69.196				18972
5757 SP					6 02 13.123	0.12	4	69.812	-86 54 37.69	0.12	4	69.812				18972
5758	-51	1731	9.5	G5	6 02 15.240	0.16	5	71.810	-51 06 56.07	0.23	4	71.492				722
5759	-70	481	8.0	K5	6 02 15.335	0.11	4	70.094	-70 06 41.11	0.20	4	70.094				18973
5760	+ 4	1116	5.70	K0	6 02 19.774	0.05	13	71.050	+ 4 09 47.35	0.06	12	71.041	230	7704	1301	30230
5761	-16	1347	8.6	G5	6 02 21.792	0.16	2	70.954	-16 36 41.08	0.09	2	70.954				6816
5762	-19	1343	8.5	K2	6 02 21.869	0.00	2	72.496	-19 43 28.39	0.04	2	72.496				6817
5763	+ 2	1126	8.1	B9	6 02 26.032	0.19	2	72.532	+ 2 06 53.79	0.20	2	72.532				6818
5764	-32	2743	5.64	B3	6 02 28.582	0.04	6	71.307	-32 10 09.43	0.08	6	71.307	2464	7708	1302	32464
5765	-39	2354	8.1	K0	6 02 28.943	0.06	4	70.398	-39 49 56.17	0.08	4	70.398				6819
5766	-59	571	7.9	K2	6 02 29.600	0.16	4	70.786	-59 36 12.59	0.07	4	70.786				6820
5767	-20	1275	8.7	K0	6 02 31.551	0.05	4	69.187	-20 53 44.17	0.01	4	69.187				6821
5768	-33	2709	9.0	K0	6 02 32.078	0.06	4	71.458	-33 32 04.52	0.17	4	71.458				6822
5769	-17	1344	7.82	B8	6 02 34.266	--	1	71.938	-17 57 07.21	--	1	71.938		7710		6823
5770	-45	2297	8.4	K5	6 02 35.176	0.15	4	70.486	-45 43 14.91	0.19	4	70.486				723
5771	-6	1400	9.1	K0	6 02 35.329	0.09	4	70.436	-6 06 06.71	0.10	3	70.275				26054
5772	-14	1326	8.5	K2	6 02 36.712	--	1	71.946	-14 06 55.62	--	1	71.946				6824
5773	-72	443	7.7	K5	6 02 38.615	0.11	4	70.733	-72 08 42.37	0.07	4	70.733				18974
5774	-28	2689	7.6	G5	6 02 41.836	0.11	4	70.002	-28 36 47.91	0.13	4	70.002				6825
5775	-47	2173	9.4	K0	6 02 42.000	0.19	4	70.771	-47 26 31.44	0.05	4	70.771				724
5776	-34	2631	9.0	K5	6 02 42.101	0.14	4	71.005	-34 03 12.04	0.07	4	71.005				6826
5777	-8	1310	8.5	K0	6 02 45.458	0.10	2	72.574	-8 01 02.97	0.01	2	72.574				6827
5778	-9	1321	8.1	G0	6 02 48.083	0.23	2	72.024	-9 17 11.98	0.24	2	72.024				6828
5779	+ 0	1270	7.26	K5	6 02 48.242	0.12	2	71.983	+ 0 37 04.23	0.11	2	71.983		7714		6829

5727 A 4632AB, 9.0m-10.2m, 0°5, 247°.

5740 A 4642AB, 9.1m-10.4m, 0°3, 333°.

CATALOG OF 23,001 STARS FOR 1950.0

315

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
5780	-43	2221	9.0	K0	6 02 51.197	0.09	4	71.296	-43 52 12.49	0.13	4	71.296				725
5781	-36	2629	8.6	K0	02 52.147	0.05	4	70.509	-36 42 17.34	0.17	4	70.509				6830
5782	-76	367	8.8	K0	02 54.539	0.06	4	69.706	-76 26 02.80	0.25	4	69.706				18975
5782	SP				02 54.441	0.12	5	71.403	-76 26 02.80	0.31	4	71.442				18975
5783	+16	995	8.9	G5	02 58.635	0.06	4	71.976	+16 36 03.47	0.14	4	71.976				26056
5784	-0	1164	8.6	K0	6 03 00.919	0.08	2	71.382	-0 32 07.86	0.01	2	71.382				6831
5785	-45	2300	6.22	F8	03 01.823	0.05	37	70.862	-45 02 02.74	0.05	35	70.826	231	7719	1303	30231
5786	-74	368	8.01	K0	03 01.939	0.11	4	70.754	-74 07 49.11	0.08	4	70.754		7718		18976
5787	-35	2678	8.4	K0	03 16.581	0.26	4	70.540	-35 47 39.66	0.08	4	70.540				6832
5788	-44	2419	8.3	K5	03 26.336	0.15	5	71.363	-44 54 36.90	0.26	4	71.180				726
5789	-27	2731	8.5	G5	6 03 31.024	0.08	4	70.191	-27 11 15.24	0.05	4	70.191				6833
5790	+3	1123	8.5	K0	03 36.980	0.08	2	70.485	+3 20 29.59	0.22	2	70.485				6834
5791*	-49	2043	8.6	K0	03 46.089	0.10	4	70.786	-49 11 43.52	0.09	4	70.786				727
5792	-31	2984	8.7	G5	03 48.381	0.14	4	70.753	-31 23 07.88	0.08	4	70.753				6835
5793	-10	1374	8.8	F5	03 51.147	0.03	2	70.485	-10 52 51.36	0.23	2	70.485				6836
5794	-79	208	8.9	K5	6 03 51.325	0.36	4	69.475	-79 13 05.19	0.22	4	69.475				18977
5794	SP				03 51.212	0.23	4	70.484	-79 13 05.20	0.41	4	70.484				18977
5795	-40	2244	7.8	K2	03 52.371	0.05	4	69.773	-40 03 17.42	0.13	4	69.773				728
5796	-14	1331	4.67	A0	03 53.437	0.11	6	69.280	-14 55 45.19	0.12	6	69.280	2466	7742	1305	32466
5797	-60	549	9.01	K0	03 55.680	0.33	4	69.501	-60 35 51.66	0.17	4	69.501		7743		6837
5798	-24	3685	8.75	B9	6 03 59.097	0.11	4	70.292	-24 54 57.41	0.21	4	70.292		7746		6838
5799	-4	1362	5.37	B3	04 09.918	0.07	6	70.836	-4 11 13.99	0.14	6	70.836	2467	7750	1306	32467
5800	-29	2769	5.72	A0	04 09.951	0.03	57	71.343	-29 45 07.49	0.03	57	71.343	1164	7751	1307	31164
5801	-69	565	9.0	K5	04 12.725	0.22	4	69.753	-69 42 20.07	0.16	4	69.753				18978
5802	-51	1744	9.2	K2	04 20.473	0.08	4	69.571	-51 17 49.28	0.18	4	69.571				729
5803	-16	1357	6.68	G5	6 04 24.478	0.13	3	70.953	-16 30 40.71	0.13	2	71.382		7761		6839
5804	+0	1285	7.43	K2	04 25.534	0.17	2	71.565	+0 05 01.57	0.02	2	71.565			1309	6840
5805	-42	2337	8.3	G5	04 25.871	0.20	4	70.472	-42 47 03.17	0.19	4	70.472				730
5806	-3	1297	6.75	B5	04 26.428	0.30	2	70.580	-3 20 03.33	0.23	2	70.580		7762	1310	6841
5807	-38	2418	9.0	K2	04 27.707	0.13	4	69.955	-38 57 57.35	0.04	4	69.955				6842
5808	-11	1386	6.38	B5	6 04 31.343	0.04	2	70.561	-11 09 59.98	0.36	2	70.561		7764	1311	6843
5809	-61	573	8.0	K2	04 32.302	0.08	5	69.803	-61 16 36.06	0.08	4	69.550				6844
5810	+1	1218	8.3	F2	04 38.859	0.13	2	71.462	+1 30 57.00	0.14	2	71.462				6845
5811	-24	3699	7.06	F0	04 41.949	0.13	4	70.505	-24 55 12.61	0.08	4	70.505		7771		6846
5812	+14	1152	4.40	B2	04 42.958	0.06	15	70.706	+14 46 33.95	0.08	14	70.691	232	7772	1313	30232
5813	-0	1177	8.8	A0	6 04 46.111	0.26	2	71.503	-0 53 55.52	0.15	2	71.503				6847
5814	-23	3436	7.13	A0	04 46.203	0.09	4	71.432	-23 05 11.70	0.15	4	71.432		7775		6848
5815	-54	966	8.2	K2	04 46.711	0.13	4	69.476	-54 30 10.48	0.14	4	69.476				6849
5816	+2	1137	8.5	A5	04 48.515	0.18	2	71.533	+2 08 58.20	0.09	2	71.533		7777		6850
5817	-22	1315	8.5	K5	04 50.295	0.10	4	70.715	-22 05 09.46	0.11	4	70.715				6851
5818	-57	952	8.6	K0	6 04 58.289	0.05	4	70.174	-57 58 55.28	0.11	4	70.174				6852
5819	-5	1506	8.8	A0	04 59.639	0.05	2	71.567	-5 22 57.78	0.02	2	71.567				6853
5820	+4	1128	8.9	A0	05 00.999	0.10	2	71.592	+4 24 41.29	0.35	2	71.592				6854
5821	-3	1302	8.3	B9	05 04.635	0.12	3	72.037	-3 35 44.61	0.01	2	72.007				6855
5822	-15	1272	8.5	K5	05 12.446	0.01	2	71.601	-15 15 16.58	0.55	2	71.601				6856
5823	-53	1017	8.8	K0	6 05 16.967	0.10	4	70.146	-53 04 43.22	0.13	4	70.146				6857
5824	-12	1384	8.4	K5	05 21.702	0.10	3	71.400	-12 01 46.05	0.23	3	71.400				6858
5825	-30	2849	8.1	K5	05 31.549	0.10	4	71.061	-30 37 09.37	0.19	4	71.061				6859
5826	-37	2605	7.52	K5	05 33.763	0.24	4	69.496	-37 01 43.42	0.12	4	69.496		7795		6860
5827	-35	2707	7.8	A0	05 42.576	0.08	4	69.951	-35 13 00.06	0.09	4	69.951				6861
5828	-56	1011	8.4	K0	6 05 44.512	0.04	4	70.589	-56 05 34.64	0.08	4	70.589				6862
5829	-86	77	8.2	A5	05 45.239	0.26	4	69.913	-86 04 36.48	0.03	4	69.913				18979
5829	SP				05 45.283	0.14	4	70.832	-86 04 36.24	0.18	4	70.832				18979
5830	-37	2609	5.13	B9	05 48.665	0.07	7	70.922	-37 14 41.52	0.10	6	70.728	2468	7805	1317	32468
5831*	+17	1139	8.4	G0	05 49.846	0.29	2	71.640	+17 24 39.67	-	1	72.109		7806		26067
5832	-34	2663	8.1	K0	6 05 53.053	0.09	4	69.521	-34 28 40.61	0.09	4	69.521				6863
5833	-19	1365	8.6	A0	05 58.872	0.13	2	70.555	-19 25 23.55	0.26	2	70.555				6864
5834	-38	2433	8.6	F2	06 12.988	0.10	4	69.530	-38 38 06.97	0.10	4	69.530				6865
5835	-7	1299	6.65	A2	06 21.280	0.07	2	70.522	-7 55 37.38	0.16	2	70.522		7818		6866
5836	-2	1495	7.6	G5	06 25.285	0.13	2	71.517	-2 01 39.21	0.39	2	71.517				6867
5837	-67	555	8.2	K5	6 06 30.450	0.16	4	69.565	-67 24 48.41	0.07	4	69.565				18980
5838	-62	582	5.05	K0	06 35.979	0.10	6	70.520	-62 08 44.57	0.04	6	70.520	2469	7825	1318	32469
5839	-58	623	8.3	K0	06 40.760	0.04	4	69.441	-58 45 55.05	0.14	4	69.441				6868
5840	-22	1327	5.46	A0	06 51.671	0.02	101	71.257	-22 25 02.87	0.03	98	71.264	1165	7830	1319	31165
5841	-14	1347	7.9	F0	06 52.938	0.00	2	71.545	-14 03 20.59	0.07	2	71.545				6869
5842	-41	2243	8.0	G5	6 06 53.071	0.13	4	69.729	-41 15 50.24	0.10	4	69.729				731
5843	-46	2212	8.0	K0	06 55.261	0.15	4	69.552	-46 50 24.46	0.14	4	69.552				732
5844	-64	516	8.2	K5	06 56.932	0.12	5	70.179	-64 22 47.54	0.19	4	70.020				18981
5845	-13	1366	7.9	F0	06 57.136	0.10	2	71.554	-13 12 39.46	0.12	2	71.554			1320	6870
5846	-6	1431	9.1	B5	07 04.918	0.21	4	70.445	-6 18 56.45	0.13	3	70.287				26073
5847	-20	1297	8.8	K0	6 07 05.010	0.04	4	69.178	-20 40 16.74	0.20	4	69.178				6871
5848	-3	1310	9.0	G0	07 06.072	0.06	2	71.084	-3 23 09.69	0.19	2	71.084				26074
5849	-18	1318	8.2	K5	07 09.027	0.04	2	71.958	-18 29 11.67	0.18	2	71.958				6872
5850	-52	864	8.8	M0	07 10.547	0.06	4	68.944	-52 31 43.60	0.11	4	68.944				6873
5851	+2	1144	6.72	K0	07 12.026	0.15	2	72.498	+2 52 48.94	0.11	2	72.498		7839		6874

5791 9.5m-11.2m, 1°3, 60°.

5831 A 4730, 9.0m-9.4m, 1°0, 241°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
5852	- 9	1347	8.5	G5	6 07 28.842	- -	1	71.853	- 9 25' 20.67	- -	1	71.853				6875
5853	+ 4	1147	8.7	F5	07 31.049	- -	1	71.891	+ 4 43 44.33	- -	1	71.891				6876
5854	-78	218	8.4	M1	07 34.214	0.14	4	69.649	-78 33 07.18	0.11	4	69.649				18982
5854	SP				07 34.161	0.10	4	69.978	-78 33 07.60	0.25	4	69.978				18982
5855	-20	1303	8.4	K2	07 37.502	0.06	4	70.287	-20 29 38.99	0.15	4	70.287				6877
5856	-50	2087	9.0	G5	6 07 39.675	0.18	4	70.560	-50 39 54.57	0.11	4	70.560				733
5857	-32	2807	8.4	K2	07 42.717	0.14	4	70.024	-32 03 23.63	0.23	4	70.024				6878
5858	- 4	1383	8.5	B9	07 44.141	0.19	2	72.509	- 4 40 19.97	0.03	2	72.509				6879
5859	- 7	1305	8.2	K0	07 45.377	0.19	2	72.442	- 7 05 41.10	0.14	2	72.442				6880
5860	-36	2678	9.2	K5	07 48.756	0.12	4	71.230	-36 07 31.56	0.18	4	71.230				6881
5861	-29	2819	8.0	K0	6 07 49.248	0.13	4	70.494	-29 26 57.70	0.17	4	70.494				6882
5862	- 1	1133	8.8	G5	07 50.376	0.12	2	71.964	- 1 59 46.39	0.00	2	71.964				6883
5863	-14	1353	8.6	K5	07 55.885	0.06	2	72.064	-14 32 15.29	0.18	2	72.064				6884
5864	-63	529	9.0	K5	07 59.244	0.06	4	70.770	-63 12 43.64	0.17	4	70.770				6885
5865	-59	594	8.0	K0	08 07.485	0.11	5	70.992	-59 27 20.39	0.17	4	70.705				6886
5866	-46	2222	9.0	K2	6 08 09.546	0.20	4	70.549	-46 39 59.75	0.21	4	70.549				734
5867	-30	2882	8.9	G5	08 13.585	0.10	4	71.134	-30 53 53.76	0.21	4	71.134				6887
5868	-25	2984	8.2	G5	08 20.119	0.10	4	71.179	-25 37 14.99	0.11	4	71.179				6888
5869	+ 2	1149	7.8	K2	08 26.621	0.07	2	70.525	+ 2 20 32.68	0.32	2	70.525				6889
5870	-39	2417	8.6	K5	08 29.193	0.17	4	70.497	-39 11 51.47	0.19	4	70.497				6890
5871	-51	1773	7.94	K5	6 08 49.141	0.17	4	70.740	-51 23 42.20	0.11	4	70.740	7880			735
5872	-33	2775	9.0	K2	08 50.055	0.18	4	70.001	-33 05 25.48	0.12	4	70.001				6891
5873	- 5	1534	8.4	A0	08 50.120	0.05	3	71.001	- 5 03 01.48	0.37	2	71.454				6892
5874	-65	555	8.54	K0	08 52.053	0.16	4	71.018	-65 04 32.51	0.19	4	71.018	7882			18983
5875	-45	2346	9.7	G0	09 02.895	0.04	4	70.273	-45 29 23.32	0.16	4	70.273				736
5876	-68	474	5.21	B9	6 09 03.281	0.03	69	70.862	-68 49 58.09	0.04	66	70.794	1166	7886	1326	31166
5877	+19	1253	5.70	B9	09 03.577	0.16	7	71.877	+19 48 12.51	0.15	6	72.036	2471	7887	1327	32471
5878	-16	1386	8.5	K5	09 06.691	0.29	2	70.457	-16 34 39.20	0.34	2	70.457				6893
5879	-31	3058	7.6	K0	09 09.227	0.14	4	69.437	-31 45 41.71	0.11	4	69.437				6894
5880	-45	2349	6.22	B9	09 13.583	0.09	6	70.367	-45 16 11.84	0.13	6	70.367	2472	7893	1329	32472
5881	+ 0	1317	8.6	A0	6 09 17.962	0.37	2	70.599	+ 0 45 48.56	0.12	2	70.599				6895
5882	-10	1411	8.1	K0	09 19.040	0.13	2	70.561	-10 14 16.63	0.25	2	70.561				6896
5883	-54	980	4.84	B1	09 19.372	0.03	67	71.215	-54 57 24.45	0.04	64	71.208	235	7898	1330	30235
5884	-27	2790	7.49	A2	09 28.254	0.19	4	69.457	-27 02 42.70	0.17	4	69.457	7901			6897
5885	-13	1380	8.8	K2	09 30.763	0.03	2	71.545	-13 12 32.20	0.15	2	71.545				6898
5886	-18	1334	6.79	K2	6 09 31.296	0.02	2	71.600	-18 10 24.18	0.05	2	71.600				6899
5887	-22	1337	8.5	G5	09 33.524	0.14	4	68.706	-22 53 02.54	0.10	4	68.706				6900
5888	-44	2483	7.10	K2	09 48.178	0.03	4	70.007	-44 54 05.85	0.06	4	70.007	7906			737
5889	-58	637	7.6	K2	09 52.720	0.07	4	70.241	-58 50 31.29	0.15	4	70.241				6901
5890	-65	558	8.7	K2	09 57.642	0.09	4	70.745	-65 53 28.44	0.07	3	70.708				18984
5891	- 3	1339	8.3	G5	6 09 57.742	0.06	2	70.540	- 3 37 23.41	0.07	2	70.540				6902
5892	- 2	1510	9.1	F8	09 58.000	0.01	3	71.859	- 2 56 13.41	0.04	3	71.859				26081
5893	-10	1416	8.6	K0	10 05.760	0.07	2	71.642	-10 28 28.43	0.23	2	71.642				6903
5894	- 1	1147	8.1	A0	10 06.165	0.07	2	70.562	- 1 19 12.75	0.13	2	70.562	7910			6904
5895	-40	2310	9.0	G5	10 11.336	0.07	4	70.007	-40 24 17.37	0.22	4	70.007				738
5896	-61	597	7.46	F0	6 10 21.966	0.11	4	70.502	-61 29 13.77	0.04	4	70.502	7919			6905
5897	-24	3791	8.6	K0	10 23.700	0.15	4	69.233	-24 30 31.46	0.13	4	69.233				6906
5898	-73	356	8.6	K5	10 24.358	0.17	7	71.308	-73 35 08.05	0.09	7	71.308				18985
5899	-21	1386	8.9	A0	10 24.836	0.09	4	69.691	-21 29 03.82	0.09	4	69.691				6907
5900	-67	561	9.3	F5	10 37.635	0.21	5	71.241	-67 27 06.59	0.14	4	71.017				18986
5901	-35	2756	8.7	K2	6 10 40.830	0.11	4	69.996	-35 14 30.89	0.12	4	69.996				6908
5902	-27	2806	7.66	K0	10 42.141	0.11	4	70.704	-27 42 41.80	0.15	4	70.704	7932			6909
5903	-81	176	8.28	A0	10 44.390	0.09	4	69.745	-81 58 51.75	0.17	4	69.745	7936			18987
5903	SP				10 44.494	0.04	4	70.322	-81 58 51.96	0.15	4	70.322	7936			18987
5904	- 7	1327	8.5	K0	10 44.551	0.28	2	70.596	- 7 26 30.28	0.01	2	70.596				6910
5905	-55	964	8.8	K2	6 10 47.575	0.13	4	69.998	-55 47 18.37	0.12	4	69.998				6911
5906	-36	2718	8.1	G5	10 59.455	0.08	5	70.984	-36 37 03.30	0.14	5	70.984	2473	7946	1335	6912
5907	-65	561	4.88	M3	11 08.386	0.12	6	71.444	-65 34 36.68	0.12	6	71.444				32473
5908	-15	1313	8.3	K2	11 08.615	0.10	3	71.080	-15 07 58.84	0.05	2	71.571				6913
5909	-30	2928	8.87	K5	11 10.475	0.10	4	70.262	-30 33 21.48	0.14	4	70.262	7948			6914
5910	+12	1069	8.8	K5	6 11 12.661	0.19	5	71.010	+12 17 20.64	0.28	4	71.033				26087
5911	+ 2	1163	7.9	K0	11 15.624	0.09	3	72.060	+ 2 49 34.10	0.26	3	72.060	7951			6915
5912	-13	1398	8.9	K0	11 17.239	0.31	2	72.062	-13 27 05.28	0.01	2	72.062				6916
5913	- 8	1355	8.7	K0	11 18.411	0.33	2	70.588	- 8 39 15.99	0.10	2	70.588				6917
5914	-21	1391	8.4	A0	11 20.422	0.06	4	70.195	-21 15 07.00	0.14	4	70.195				6918
5915	-48	2203	9.6	G5	6 11 25.632	0.10	4	70.455	-48 18 35.99	0.14	4	70.455				739
5916	-63	535	9.0	K0	11 32.204	0.13	4	70.550	-63 54 55.16	0.08	4	70.550				18988
5917	-18	1343	8.9	A0	11 33.558	0.11	2	70.599	-18 44 31.86	0.13	2	70.599				6919
5918	-81	175	7.30	F0	11 35.887	0.14	4	69.938	-81 03 07.70	0.10	4	69.938	7957			18989
5918	SP				11 35.884	0.15	3	71.038	-81 03 07.83	0.21	3	71.038	7957			18989
5919	-49	2114	8.9	K2	6 11 38.898	0.11	4	69.972	-49 23 49.72	0.12	4	69.972				740
5920	-60	567	8.56	K2	11 39.472	0.02	4	69.931	-60 14 30.03	0.27	4	69.931	7960			6920
5921	-23	3577	6.41	G5	11 41.138	0.06	4	70.436	-23 50 50.92	0.19	4	70.436	7961			6921
5922	-65	564	8.12	K2	11 44.410	0.16	4	70.115	-65 32 03.36	0.13	4	70.115	7963			18990
5923	-74	374	5.14	K0	11 44.598	0.04	67	71.436	-74 44 16.97	0.03	67	71.436	239	7962	1336	30239

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
5923	SP				6 11 44.563	0.06	52	71.366	-74 44 17.18	0.11	50	71.301	239	7962	1336	50239
5924		+ 0	1338	8.7	11 51.122	0.10	2	70.506	+ 0 52 32.78	0.31	2	70.506				6922
5925		+ 3	1174	8.8	11 55.897	-	1	71.009	+ 3 30 25.15	-	1	71.009				6923
5926		+ 2	1171	7.6	12 00.921	0.15	2	71.604	+ 2 18 22.02	0.20	2	71.604				6924
5927		-72	458	8.4	12 07.442	0.22	4	70.550	-72 09 04.74	0.26	4	70.550				18991
5928		-19	1391	8.0	6 12 08.901	0.12	3	72.056	-19 30 33.47	0.75	2	72.014				6925
5929		-56	1034	8.9	12 09.495	0.13	4	69.706	-56 20 27.28	0.06	3	69.323				6926
5930		-37	2681	8.0	12 09.732	0.14	4	69.935	-37 32 38.60	0.04	4	69.935				6927
5931		+29	1154	4.45	12 11.364	0.03	101	71.323	+29 31 00.59	0.05	100	71.305	1168	7981	1338	81168
5932		- 0	1227	8.7	12 13.994	0.04	2	70.576	- 0 31 30.29	0.18	2	70.576				6928
5933		- 4	1422	7.5	6 12 15.445	0.03	2	71.989	- 4 25 57.26	0.23	2	71.989				6929
5934		-26	2841	8.5	12 17.360	0.09	4	70.428	-26 08 50.92	0.05	4	70.428				6930
5935		+13	1173	5.81	12 18.232	0.07	6	70.647	+13 52 03.40	0.12	6	70.647	2474	7984	1340	32474
5936		- 0	1228	8.6	12 19.058	0.18	2	71.649	- 0 23 55.40	0.51	2	71.649				6931
5937		-12	1419	8.6	12 23.373	0.02	3	71.036	-12 52 20.74	0.37	3	71.036				6932
5938		-34	2737	9.0	6 12 23.549	0.05	4	70.010	-34 14 19.96	0.13	4	70.010				6933
5939		- 6	1469	4.09	12 24.930	0.08	7	71.025	- 6 15 29.19	0.15	6	70.848	2475	7986	1341	32475
5940		-51	1805	8.8	12 25.209	0.11	5	70.301	-51 57 10.75	0.09	4	70.173				6934
5941		-41	2291	8.5	12 27.174	0.14	4	69.968	-41 15 59.42	0.22	4	69.968				741
5942		-12	1420	8.8	12 30.520	0.20	2	71.646	-12 19 35.27	0.16	2	71.646				6935
5943		- 8	1361	7.5	6 12 31.260	0.21	2	71.574	- 8 47 15.13	0.29	2	71.574				6936
5944		-11	1425	8.4	12 31.261	0.19	2	71.612	-11 07 23.34	0.18	2	71.612				6937
5945p		-29	2898	7.08	12 34.468	0.07	4	69.406	-29 35 16.27	0.12	4	69.406		7989		6938
5946		-77	243	6.89	12 44.247	0.06	6	70.043	-77 05 30.28	0.07	6	70.043	2476	7993		32476
5946	SP				12 44.226	0.16	6	69.282	-77 05 29.92	0.42	6	69.282	2476	7993		52476
5947		-42	2419	9.0	6 12 51.713	0.16	4	70.453	-42 04 48.56	0.14	4	70.453				742
5948		+ 3	1180	7.7	12 51.892	0.01	2	71.536	+ 3 58 31.77	0.02	2	71.536				6939
5949		+ 2	1175	9.0	12 52.749	0.03	2	71.474	+ 2 09 19.81	0.09	2	71.474				6940
5950		- 0	1234	5.68	13 01.431	0.09	6	70.199	- 0 29 34.72	0.12	6	70.199	2477	8001	1343	32477
5951		- 9	1384	9.1	13 06.347	0.13	3	71.494	- 9 23 36.70	0.20	3	71.494				26093
5952		+ 4	1181	6.44	6 13 08.278	0.06	7	71.203	+ 4 18 04.41	0.08	6	71.251	2478	8010	1345	32478
5953		-53	1044	8.3	13 09.954	0.05	4	70.590	-53 21 39.53	0.10	4	70.590				6941
5954		-2	1530	8.7	13 16.123	0.16	3	71.112	- 2 22 04.18	0.49	2	71.620				6942
5955		- 6	1475	7.9	13 19.962	0.00	2	71.580	- 6 11 26.86	0.09	2	71.580		8018		6943
5956		-82	143	7.44	13 24.719	0.10	6	70.032	-82 01 51.43	0.14	6	70.032	3977	8021		33977
5956	SP				6 13 24.728	0.14	6	68.912	-82 01 51.30	0.23	6	68.912	3977	8021		53977
5957		-46	2278	8.06	13 26.105	0.15	4	70.520	-46 59 40.51	0.09	4	70.520		8022		743
5958		-13	1411	4.99	13 27.382	0.16	3	71.078	-13 42 02.27	0.39	3	71.078		8024		6944
5959		-20	1339	8.0	13 32.563	0.07	4	69.394	-20 11 02.82	0.13	4	69.394				6945
5960		-38	2523	8.9	13 33.194	0.11	4	70.548	-38 27 23.63	0.15	4	70.548				6946
5961		-75	368	7.43	6 13 34.662	0.13	4	69.374	-75 04 06.98	0.17	4	69.374		8030		18992
5961	SP				13 34.701	0.37	4	70.429	-75 04 07.17	0.19	4	70.429		8030		18992
5962		-42	2429	9.2	13 36.268	0.18	4	70.983	-43 00 52.78	0.17	4	70.983				744
5963		+12	1084	5.11	13 38.199	0.07	8	69.493	+12 17 19.59	0.04	8	69.493	1169	8033	1350	31169
5964		-66	506	9.33	13 44.522	0.28	4	70.091	-66 46 59.86	0.14	4	70.091		8035		18993
5965		-39	2480	8.5	6 13 51.005	0.13	4	70.541	-39 18 52.41	0.13	4	70.541				6947
5966		-16	1415	5.88	13 53.858	0.09	2	70.584	-16 35 59.30	0.12	2	70.584		8038		6948
5967		- 6	1477	8.7	13 57.255	0.18	2	71.633	- 6 10 04.16	0.33	2	71.633		8040		6949
5968		- 9	1395	7.8	14 00.862	0.09	2	71.455	- 9 55 00.17	0.28	2	71.455				6950
5969		-40	2349	9.1	14 15.468	0.06	5	71.053	-40 09 12.72	0.08	4	71.292				745
5970		-54	1000	8.9	6 14 18.086	0.07	4	68.929	-54 32 27.30	0.20	4	68.929				6951
5971		-17	1423	8.4	14 18.863	0.26	2	70.574	-17 29 15.88	0.33	2	70.574				6952
5972		+ 9	1173	5.29	14 21.171	0.09	7	71.119	+ 9 57 43.02	0.06	6	70.957	2480	8051	1352	32480
5973		-34	2763	7.8	14 24.265	0.30	4	71.194	-34 02 09.87	0.14	4	71.194				6953
5974		-44	2541	8.5	14 27.620	0.05	4	70.846	-44 24 29.37	0.02	4	70.846				746
5975		-49	2148	9.0	6 14 29.492	0.17	4	71.244	-49 18 44.88	0.23	4	71.244				747
5976		-15	1328	8.0	14 34.470	0.20	2	70.517	-15 06 23.90	0.07	2	70.517				6954
5977		-32	2900	9.4	14 36.485	0.11	4	71.304	-32 25 16.13	0.10	3	71.447				6955
5978		-35	2799	7.1	14 40.945	0.18	4	70.537	-35 24 44.01	0.08	4	70.537				6956
5979		-18	1365	8.0	14 41.797	0.11	2	70.513	-18 35 15.93	0.12	2	70.513				6957
5980		-62	603	8.2	6 14 45.032	0.21	4	70.458	-62 21 06.87	0.18	3	70.326				6958
5981		-35	2800	4.51	14 46.301	0.04	69	71.703	-35 07 20.03	0.03	68	71.696	238	8062	1354	30238
5982		-60	580	8.8	14 48.518	0.13	4	70.260	-60 38 00.78	0.13	4	70.260				6959
5983		-28	2852	8.5	14 49.880	0.09	4	69.462	-28 54 54.71	0.22	4	69.462				6960
5984		-57	974	9.0	14 50.447	0.08	5	70.156	-57 41 00.63	0.19	4	69.992				6961
5985		-50	2143	8.5	6 14 51.305	0.09	5	70.522	-50 57 30.72	0.13	5	70.522				748
5986		-31	3135	9.3	14 53.041	0.15	4	69.957	-31 38 43.84	0.06	4	69.957				6962
5987		-22	1364	6.04	14 57.468	0.08	4	69.647	-22 41 36.94	0.04	4	69.647		8065		6963
5988		- 5	1567	8.7	15 03.619	0.04	2	70.487	- 5 17 20.28	0.20	2	70.487				6964
5989		-35	2802	8.3	15 05.539	0.11	4	70.744	-35 53 03.18	0.08	4	70.744				6965
5990		-21	1410	8.6	6 15 11.046	0.16	4	69.291	-21 43 22.35	0.18	4	69.291				6966
5991		-41	2312	9.0	15 11.449	0.15	4	69.987	-41 30 45.06	0.09	4	69.987				749
5992		+14	1235	5.98	15 14.773	0.10	7	70.000	+14 24 11.04	0.10	6	69.847	2481	8073	1356	32481
5993		-19	1405	6.57	15 33.676	0.02	3	71.004	-19 10 06.96	0.18	2	71.458		8083		6967
5994p		-24	3871	7.26	15 33.837	0.18	4	68.960	-24 25 24.78	0.18	4	68.960				6968

5945 A 4858, 10.8m, 6^m3, 43°.5994 A 4908, 11.2m, 6^m7, 49°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
5995	+ 4	1196	7.9	K0	6 15 38.428	0.28	2	71.510	+ 4 00 18.78	0.03	2	71.510				6969
5996	+ 1	1295	8.5	F5	15 40.350	0.01	2	70.572	+ 1 35 02.64	0.33	2	70.572				6970
5997	+21	1189	9.1	--	15 40.637	--	1	72.020	+21 51 12.24	--	1	72.020				26097
5998	-71	425	7.25	K5	15 42.046	0.12	5	69.330	-71 38 15.23	0.11	5	69.330	2482	8089		32482
5998	SP				15 42.030	0.13	20	71.273	-71 38 14.76	0.23	19	71.255	2482	8089		52482
5999	- 6	1487	6.89	K0	6 15 42.526	0.19	2	70.550	- 6 42 18.60	0.30	2	70.550				6971
6000*	- 5	1576	6.65	A0	15 50.260	0.15	2	70.457	- 5 38 01.18	0.18	2	70.457				6972
6001	-19	1407	5.31	B3	16 04.191	0.16	6	68.894	-19 56 46.10	0.23	6	68.894	2483	8099	1360	32483
6002	- 7	1365	8.6	K2	16 09.001	0.15	2	71.465	- 7 49 10.52	0.06	2	71.465				6973
6003	+ 4	1200	8.7	F8	16 12.966	0.22	2	70.495	+ 4 34 30.92	0.33	2	70.495				6974
6004	-14	1396	8.3	A0	6 16 13.363	0.29	2	70.555	-14 34 37.59	0.07	2	70.555				6975
6005	-27	2870	8.5	K0	16 21.816	0.05	4	70.016	-27 02 28.05	0.23	4	70.016				6976
6006	-47	2273	8.5	K5	16 28.538	0.07	4	69.705	-47 20 47.60	0.08	4	69.705				750
6007	- 1	1188	8.0	K0	16 35.807	0.18	2	70.558	- 1 20 43.01	0.20	2	70.558				6977
6008	- 3	1386	8.5	G0	16 38.296	0.16	2	71.540	- 3 25 01.16	0.22	2	71.540				6978
6009	-50	2159	9.0	K0	6 16 40.329	0.07	4	69.253	-50 29 23.77	0.16	4	69.253				751
6010	-15	1342	8.3	M1	16 44.520	0.16	2	71.912	-15 22 55.23	0.31	2	71.912				6979
6011	-43	2366	8.5	K2	16 49.497	0.05	4	69.987	-43 40 28.12	0.17	4	69.987				752
6012	-20	1355	5.66	B5	16 50.679	0.09	4	70.738	-20 54 14.22	0.14	4	70.738				6980
6013	-28	2897	8.0	G0	16 54.433	0.03	4	70.774	-28 06 06.04	0.04	4	70.774		8120		6981
6014	-48	2242	8.45	K5	6 16 58.113	0.15	4	70.014	-48 40 39.67	0.20	4	70.014		8125		753
6015	-23	3696	8.6	K0	16 58.433	0.05	4	70.257	-23 30 42.22	0.13	4	70.257				6982
6016	-69	590	7.68	K2	17 02.339	0.09	4	69.289	-69 03 20.18	0.19	4	69.289		8127		18995
6017	-56	1049	8.8	K2	17 08.061	0.05	4	69.972	-56 51 04.26	0.08	4	69.972				6983
6018	- 4	1457	8.8	A0	17 17.608	0.37	2	72.484	- 4 29 14.78	0.02	2	72.484				6984
6019	- 7	1373	5.13	B3	6 17 18.203	0.02	72	71.219	- 7 48 01.75	0.04	68	71.246	1170	8132	1362	81170
6020	-76	384	7.8	G5	17 19.851	0.05	5	69.774	-76 10 50.57	0.24	5	69.774				18996
6020	SP				17 19.849	0.12	4	70.823	-76 10 50.44	0.29	4	70.823				18996
6021	-57	980	8.0	K0	17 20.528	0.11	4	70.483	-57 18 54.56	0.10	3	70.358				6985
6022	-13	1443	8.5	A2	17 20.713	0.16	2	72.402	-13 31 57.66	0.06	2	72.402		8133		6986
6023	-17	1446	7.25	B8	6 17 28.471	0.13	2	72.443	-17 30 13.28	0.20	2	72.443		8134		6987
6024	+12	1115	8.9	A	17 31.211	0.10	4	70.200	+12 00 01.21	0.15	4	70.200				26107
6025	-22	1379	6.53	K2	17 31.540	0.10	4	71.230	-22 04 50.40	0.04	4	71.230		8141		6988
6026	-45	2431	8.9	K0	17 34.044	0.23	4	70.051	-45 52 11.91	0.13	4	70.051				754
6027	- 7	1378	6.91	A5	17 42.297	0.09	2	71.995	- 7 50 55.57	0.10	2	71.995		8150		6989
6028	-36	2809	8.8	K2	6 17 43.426	0.07	4	70.416	-36 27 06.28	0.03	4	70.416				6990
6029	+18	1180	9.0	A3	17 43.706	0.25	3	71.553	+18 33 31.85	0.41	3	71.553				26112
6030	- 8	1392	8.0	K0	17 45.213	0.07	2	72.111	- 8 48 52.37	0.22	2	72.111				6991
6031	-25	3123	8.1	K0	17 45.943	0.05	4	71.220	-25 23 00.05	0.14	4	71.220				6992
6032	-35	2839	8.5	K0	18 01.967	0.11	4	70.530	-35 31 47.23	0.13	4	70.530				6993
6033	-37	2739	9.2	K2	6 18 04.314	0.08	5	71.401	-37 01 41.65	0.28	4	71.727				6994
6034	-30	3034	9.0	F8	18 05.851	0.13	5	71.785	-30 25 52.72	0.10	5	71.785				6995
6035	-39	2525	8.23	G5	18 11.786	0.12	4	71.468	-39 27 24.56	0.21	4	71.468		8162		6996
6036	-31	3198	8.6	K2	18 17.555	0.12	4	71.558	-31 42 25.56	0.12	4	71.558				6997
6037	- 9	1423	7.3	A2	18 17.926	--	1	71.943	- 9 52 02.61	--	1	71.943				6998
6038	-42	2464	8.5	K5	6 18 18.077	0.08	4	71.490	-42 59 21.52	0.10	4	71.490				755
6039	-29	3008	7.80	K0	18 18.421	0.04	3	70.621	-29 59 42.54	0.13	3	70.621		8164		6999
6040	-30	3038	3.10	B3	18 23.554	0.07	13	70.375	-30 02 23.85	0.10	13	70.375	240	8170	1365	30240
6041	+ 0	1392	8.3	K2	18 25.148	--	1	72.845	+ 0 15 49.15	--	1	72.845				7000
6042	-58	670	9.1	K0	18 25.884	0.16	4	71.227	-58 01 54.63	0.05	4	71.227				7001
6043*	+ 2	1196	7.7	M1	6 18 26.205	0.03	3	71.101	+ 2 35 34.48	0.24	3	71.101				7002
6044	-32	2950	9.1	F2	18 39.558	0.16	4	71.549	-32 34 42.48	0.23	4	71.549				7003
6045	-11	1459	6.65	K5	18 45.580	0.01	2	71.512	-11 47 35.68	0.01	2	71.512		8177		7004
6046	-48	2259	6.39	G0	18 47.583	0.18	6	71.229	-48 42 55.67	0.08	6	71.229	2486	8179	1368	32486
6047	-34	2808	9.1	--	18 48.409	0.07	4	71.242	-34 10 57.80	0.27	4	71.242				7005
6048	-38	2587	8.7	K0	6 18 56.892	0.19	4	71.505	-38 08 08.80	0.19	4	71.505				7006
6049	-33	2911	8.2	K5	18 57.973	0.07	4	70.884	-33 33 33.05	0.09	4	70.884				7007
6050	-10	1491	8.5	G5	19 01.377	--	1	72.897	-10 30 06.26	--	1	72.897				7008
6051	-72	469	7.96	A0	19 06.795	0.14	4	70.241	-72 06 35.26	0.13	4	70.241		8187		18997
6052	-61	627	9.1	K0	19 08.745	0.06	3	70.337	-61 18 09.75	0.21	3	70.337				7009
6053	+ 2	1200	7.36	K0	6 19 10.568	--	1	71.796	+ 2 22 02.39	--	1	71.796				7010
6054	-11	1461	8.7	A5	19 16.632	0.25	2	71.547	-11 02 41.85	0.19	2	71.547				7011
6055	-46	2344	8.05	K5	19 17.720	0.09	5	71.128	-46 39 12.80	0.27	4	70.875		8190		756
6056	+ 0	1395	8.6	A0	19 21.320	0.02	3	71.724	+ 0 19 45.49	0.20	2	72.537				7012
6057	-19	1425	7.5	K0	19 28.129	0.11	2	72.704	-19 48 55.71	0.08	2	72.704				7013
6058p	- 1	1212	8.57	A3	6 19 29.856	--	1	71.041	- 2 00 14.49	--	1	71.041		8198		7014
6059	-15	1361	6.71	G5	19 51.130	0.14	2	72.550	-15 38 15.50	0.02	2	72.550		8204		7017
6060	-55	986	9.2	G8	19 52.064	0.07	6	71.611	-55 39 01.90	0.05	3	71.638				7018
6061	+22	1304	3.19	M0	19 56.180	0.12	8	70.524	+22 32 25.81	0.10	7	70.468	241	8208	1373	30241
6062	-73	372	7.9	K5	20 00.201	0.19	4	70.283	-73 20 14.52	0.11	4	70.283				18998
6063	-30	3072	7.5	K5	6 20 08.603	0.02	3	70.002	-30 30 29.01	0.11	3	70.002				7019
6064	-16	1456	8.0	G5	20 09.929	0.12	2	72.402	-16 42 17.15	0.01	2	72.402				7020
6065	-26	2960	8.0	K2	20 14.943	0.03	4	70.940	-26 15 04.79	0.25	4	70.940				7021
6066	- 0	1273	7.7	B9	20 16.847	0.08	2	71.025	- 0 48 25.24	0.28	2	71.025				7022
6067	+ 3	1218	7.5	K0	20 17.390	0.07	2	70.983	+ 3 47 12.98	0.04	2	70.983		8216	1374	7023

6000 A 4910, 6.7m-10.0m, 1°1, 218°.

6043 A 4966AB, 7.7m-11.4m, 0°9, 304°.

6058 10.8m, 6°2, 17°.

6102 A 5029, 6.7m-8.7m, 1°0, 265°.

CATALOG OF 23,001 STARS FOR 1950.0

319

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Deci 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
6068	-52	909	7.47	G5	6 20 18.662	0.08	4	70.673	-52 38 13.73	0.07	4	70.673		8217		7024
6069	-40	2421	9.2	K0	20 20.652	0.13	5	70.499	-40 51 18.84	0.20	4	70.599				757
6070	-42	2482	9.0	K5	20 22.781	0.12	4	70.022	-42 14 45.21	0.13	4	70.022				758
6071	-63	554	8.2	K5	20 27.561	0.07	4	70.015	-63 54 20.49	0.22	4	70.015				7025
6072	-17	1467	1.99	B1	20 29.792	0.06	22	70.833	-17 55 47.05	0.06	23	70.919	243	8223	1376	30243
6073	+14	1267	8.6	F8	6 20 34.129	0.15	3	70.308	+14 33 24.86	0.28	3	70.308				26119
6074	-7	1401	9.0	A0	20 36.846	0.00	2	72.565	-7 54 37.85	0.13	2	72.565				7026
6075	+17	1226	8.5	G5	20 38.433	0.09	4	71.557	+17 40 47.13	0.07	4	71.557				26121
6076	-24	3967	8.3	K5	20 44.412	0.10	4	71.212	-24 51 06.45	0.15	4	71.212				7027
6077	-0	1276	8.6	K0	20 47.757	0.24	2	73.014	-0 55 32.09	0.18	2	73.014				7028
6078	-43	2418	9.2	K5	6 20 51.173	0.07	4	70.558	-43 50 48.73	0.08	4	70.558				759
6079	-28	2952	8.5	K0	20 53.083	0.12	4	71.263	-28 50 37.92	0.08	4	71.263				7029
6080	-34	2826	8.5	K5	21 03.052	0.11	4	70.722	-34 25 34.51	0.31	4	70.722				7030
6081	-76	388	9.1	K0	21 06.622	0.19	4	69.641	-76 42 30.47	0.21	4	69.641				18999
6081 SP					21 06.679	0.23	4	70.311	-76 42 30.25	0.16	4	70.311				18999
6082	+4	1236	4.48	A5	6 21 07.028	0.02	102	70.951	+4 37 11.94	0.03	100	70.928	244	8240	1380	80244
6083	-84	90	8.6	K0	21 08.486	0.14	4	69.925	-85 02 37.50	0.16	4	69.925				19000
6083 SP					21 08.491	0.21	4	69.905	-85 02 37.53	0.15	4	69.905				19000
6084	-54	1029	9.3	K0	21 17.980	0.22	4	70.808	-54 18 22.95	0.09	4	70.808				7031
6085	-48	2279	8.5	K0	21 19.217	0.07	4	71.015	-48 44 46.96	0.10	4	71.015				760
6086	-18	1405	7.5	K0	6 21 19.736	0.24	2	71.475	-18 58 16.43	0.09	2	71.475				7032
6087	-20	1373	8.7	K0	21 22.688	0.12	4	71.242	-20 54 53.77	0.08	4	71.242				7033
6088	-9	1446	8.5	F0	21 24.359	0.14	2	72.394	-9 19 08.90	0.35	2	72.394				26124
6089	-12	1464	8.4	G0	21 24.687	0.02	2	72.576	-12 33 04.32	0.10	2	72.576				7034
6090	-4	1490	7.39	K0	21 25.380	0.18	2	73.050	-4 42 04.66	0.02	2	73.050		8253		7035
6091	-20	1374	8.6	B9	6 21 26.562	0.11	4	70.986	-20 09 01.02	0.13	4	70.986				7036
6092	-45	2471	7.5	K2	21 26.859	0.09	4	71.060	-45 53 37.54	0.21	4	71.060				761
6093	-50	2190	8.1	G5	21 28.992	0.09	4	70.079	-50 04 29.56	0.15	4	70.079				762
6094	-8	1416	7.9	K0	21 35.674	0.14	2	72.126	-8 02 28.37	0.09	2	72.126				7037
6095	+25	1255	6.56	K0	21 38.932	0.19	5	71.930	+25 04 36.14	0.26	5	71.930	2488	8261		32488
6096	-49	2222	8.5	K0	6 21 43.100	0.08	4	71.055	-49 33 48.51	0.11	4	71.055				763
6097	-11	1478	5.39	K0	21 50.228	0.04	6	71.391	-11 30 06.97	0.08	6	71.391	1171	8265	1384	31171
6098	-60	604	6.57	G0	21 53.442	0.11	6	70.697	-60 11 32.24	0.16	6	70.697	2489	8266		32489
6099	+4	1240	8.2	B9	21 53.825	0.08	2	72.548	+4 12 53.14	0.20	2	72.548				7038
6100	-25	3189	5.73	K2	21 53.964	0.13	6	71.465	-25 32 58.36	0.15	6	71.465	2490	8267		32490
6101	-33	2946	8.9	G5	6 21 57.918	0.10	4	71.061	-33 31 31.82	0.27	4	71.061				7039
6102*	-1	1231	6.56	B8	22 01.812	0.06	3	72.017	-1 23 23.60	0.05	3	72.017		8272		26126
6103	+14	1280	8.8	A5	22 05.229	--	1	69.812	+14 26 08.01	--	1	69.812				26128
6104	-62	627	8.7	M0	22 11.788	0.08	4	70.825	-62 36 41.41	0.11	4	70.825				7040
6105	-27	2958	8.0	F5	22 25.022	0.08	4	68.722	-27 17 14.59	0.11	4	68.722				7041
6106	-39	2577	7.86	K2	6 22 25.061	0.10	5	70.986	-39 40 28.66	0.14	4	71.208		8286		7042
6107	-53	1071	8.3	K0	22 27.721	0.17	4	70.770	-53 23 53.93	0.31	4	70.770				7043
6108*	+8	1324	8.7	A0	22 34.734	0.22	3	72.300	+8 02 26.42	0.35	3	72.300				26131
6109	-13	1483	8.1	G0	22 35.641	0.23	2	71.581	-13 12 04.70	0.00	2	71.581				7044
6110	-35	2883	8.3	K0	22 35.995	0.07	4	70.862	-35 15 15.68	0.11	4	70.862				7045
6111	-4	1498	9.0	A3	6 22 36.921	0.08	3	71.369	-4 24 25.21	0.15	3	71.369				26132
6112*	+3	1237	8.2	G5	22 39.052	0.19	4	71.241	+3 02 05.57	0.03	4	71.241				26133
6113	-37	2805	9.0	K0	22 41.571	0.26	4	70.842	-37 30 18.17	0.26	4	70.842				7046
6114*	+1	1332	6.46	A0	22 42.994	0.17	2	71.626	+1 31 49.92	0.01	2	71.626		8297		7047
6115	-14	1432	7.8	K0	22 45.076	0.22	2	72.080	-14 28 28.84	0.06	2	72.080				7048
6116	-52	914	*	F0	6 22 50.499	0.03	70	70.891	-52 40 02.96	0.05	67	70.892	245	8302	1391	30245
6117*	-10	1515	7.7	K0	22 53.784	0.15	2	71.552	-10 54 09.48	0.31	2	71.552				7049
6118	-38	2631	8.1	K5	22 56.609	0.21	4	70.792	-38 14 37.62	0.16	4	70.792				7050
6119	-36	2885	8.06	K5	23 02.150	0.06	5	70.824	-36 34 06.75	0.12	4	70.495		8307		7051
6120	-47	2340	8.7	K2	23 03.632	0.13	4	71.222	-47 22 39.04	0.11	4	71.222				764
6121	-2	1601	6.68	A0	6 23 04.514	0.12	2	70.555	-2 57 42.87	0.05	2	70.555		8308		7052
6122	-22	1404	8.5	K2	23 04.532	0.07	4	69.513	-22 32 33.29	0.07	4	69.513				7053
6123*	+7	1280	8.9	A0	23 05.626	0.11	4	70.523	+7 48 13.36	0.33	4	70.523				26136
6124	-40	2440	6.30	B9	23 07.057	0.10	7	70.451	-40 15 17.91	0.14	7	70.451	2492	8311	1392	32492
6125	-41	2390	8.4	K2	23 09.708	0.07	4	70.506	-41 38 29.72	0.10	4	70.506				765
6126	+2	1227	6.28	B9	6 23 10.138	0.01	2	70.516	+2 18 05.12	0.15	2	70.516		8312		7054
6127	-16	1475	8.8	K0	23 13.154	0.01	2	71.420	-16 21 42.01	0.04	2	71.420				7055
6128	-66	531	8.8	K2	23 13.429	0.11	5	71.563	-66 58 39.40	0.13	4	71.184				19001
6129	-26	3007	8.8	B9	23 20.027	0.27	4	69.897	-26 51 57.30	0.11	4	69.897				7056
6130	-46	2396	8.2	G5	23 31.822	0.16	4	70.205	-46 54 23.48	0.21	4	70.205				766
6131	-6	1542	8.5	K0	6 23 32.039	0.20	2	70.537	-6 10 30.55	0.06	2	70.537				7057
6132	-31	3278	8.3	K0	23 32.137	0.10	4	69.880	-31 07 21.23	0.05	4	69.880				7058
6133	-59	641	8.5	K2	23 38.588	0.09	4	70.595	-59 03 35.80	0.13	4	70.595				7059
6134	+2	1232	7.8	K2	23 43.780	0.11	3	72.033	+2 20 53.44	0.36	3	72.033				7060
6135	-29	3090	6.72	A0	23 44.601	0.12	4	69.438	-29 40 22.65	0.11	4	69.438		8323		7061
6136	-70	514	8.06	A2	6 23 46.272	0.13	4	71.216	-70 54 59.45	0.14	4	71.216		8325		19002
6137	-3	1432	9.0	A2	23 49.988	0.23	2	71.614	-3 33 16.18	0.06	2	71.614				7062
6138	-78	226	8.46	G5	23 50.547	0.10	4	69.578	-78 23 05.60	0.07	4	69.578		8328		19003
6138 SP					23 50.569	0.11	4	69.954	-78 23 05.18	0.21	4	69.954		8328		19003
6139	-1	1242	5.73	A0	24 07.609	0.08	7	71.050	-1 28 34.85	0.07	7	71.050	2493	8335	1395	32493

6108 A 5043AB, 9.5m-9.5m, 0°5, 1°.
 6112 A 5044AB, 8.8m-9.6m, 0°3, 25°.
 6114 8.1m-8.1m, 0°2, 16°.

6116 Canopus -0.86m.
 6117 A 5048, 7.8m-10.1m, 1°8, 116°.
 6123 A 5053AB, 9.2m-9.8m, 0°7, 25°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
6140*	-51	1897	8.5	M0	6 24 07.807	0.13	4	69.783	-51 48 35.39	0.11	3	69.003				767
6141	+0	1418	7.7	G5	24 09.147	--	1	70.061	+0 29 06.25	--	1	70.061		8336		7063
6142	-68	512	8.3	M2	24 13.927	0.16	4	70.621	-68 34 18.12	0.17	4	70.621				19004
6143	+4	1256	8.9	F2	24 17.643	0.19	3	72.098	+4 11 04.73	0.19	3	72.098				7064
6144	-7	1429	6.30	A0	24 19.824	0.06	2	71.543	-7 28 51.25	0.05	2	71.543		8343		7065
6145	-18	1424	8.9	K7	6 24 21.996	0.14	2	70.593	-18 12 07.47	0.11	2	70.593				7066
6146	+3	1251	8.6	G5	24 25.886	0.02	2	70.513	+3 24 55.09	0.29	2	70.513				7067
6147	-14	1450	6.54	K0	24 26.217	0.20	2	71.588	-14 34 20.62	0.02	2	71.588		8347		7068
6148	-56	1080	8.1	K5	24 30.854	0.07	4	69.528	-56 11 01.96	0.16	4	69.528				7069
6149	-44	2648	9.0	A0	24 34.374	0.07	4	69.957	-44 35 43.48	0.11	4	69.957				768
6150	-33	2978	8.9	K2	6 24 44.359	0.09	4	69.979	-33 47 38.45	0.11	4	69.979				7070
6151	-65	591	8.6	K2	24 45.193	0.12	4	70.046	-65 44 41.80	0.10	4	70.046				19005
6152	-82	148	8.1	A2	24 50.365	0.19	4	69.905	-82 56 41.87	0.05	4	69.905				19006
6152 SP					24 50.387	0.14	4	69.994	-82 56 41.79	0.28	4	69.994				19006
6153	-32	3044	9.1	--	25 01.183	0.12	4	69.547	-32 13 07.12	0.16	4	69.547				7071
6154	-63	575	9.2	G5	6 25 02.731	0.15	5	69.930	-63 17 02.12	0.15	4	69.708				7072
6155	-24	4043	8.0	K5	25 05.791	0.18	4	68.978	-24 12 25.05	0.08	4	68.978				7073
6156	-18	1427	8.5	G0	25 11.733	0.09	2	71.495	-18 59 42.77	0.07	2	71.495				7074
6157	-35	2911	9.1	K2	25 29.068	0.07	4	69.529	-35 58 16.81	0.20	4	69.529				7075
6158	-4	1526	4.98	B3	25 29.350	0.02	111	71.908	-4 43 47.18	0.03	110	71.917	246	8378	1402	30246
6159	+16	1159	6.33	G5	6 25 35.157	0.10	6	70.535	+16 16 17.55	0.15	6	70.535	2494	8382	1403	32494
6160	+2	1244	6.29	B9	25 40.790	0.20	2	70.532	+1 56 44.24	0.10	2	70.532				7076
6161	-0	1306	8.4	F5	25 47.441	0.05	3	71.398	-0 41 47.80	0.28	3	71.398				7077
6162	-69	614	5.40	G5	25 54.222	0.11	6	68.977	-69 39 39.32	0.17	6	68.977	2495	8390	1404	32495
6163	-64	562	8.8	F5	25 54.688	0.15	4	69.517	-64 31 17.37	0.03	4	69.517				19007
6164	-21	1470	8.6	K5	6 25 55.601	0.07	4	69.935	-21 45 55.44	0.08	4	69.935				7078
6165	-29	3128	8.6	K2	25 57.026	0.12	4	68.694	-30 01 38.17	0.03	4	68.694				7079
6166	-9	1475	8.6	G5	25 57.997	0.27	2	71.603	-9 47 28.62	0.31	2	71.603				7080
6167	+20	1441	4.06	B5	25 59.626	0.07	15	70.336	+20 14 43.90	0.12	14	70.277	1173	8394	1405	31173
6168	-12	1502	8.7	F0	26 02.612	0.25	2	72.091	-12 49 34.25	0.09	2	72.091				7081
6169	-52	930	8.14	K0	6 26 05.296	0.10	4	69.221	-52 54 25.05	0.18	4	69.221		8397		7082
6170	-27	3012	7.62	B9	26 05.870	0.08	4	69.443	-27 06 38.78	0.12	4	69.443		8399		7083
6171	-3	1450	8.5	B9	26 10.170	0.01	2	70.559	-3 45 04.42	0.13	2	70.559				7084
6172	-11	1498	8.8	K0	26 13.889	0.02	2	72.455	-11 54 47.84	0.23	2	72.455				7085
6173	-0	1308	6.66	F0	26 13.953	0.26	2	72.006	-0 32 20.71	0.31	2	72.006		8406		7086
6174	-53	1088	8.2	F0	6 26 16.028	0.10	3	69.930	-53 32 02.63	0.09	4	70.650				7087
6175	-32	3065	8.8	K5	26 16.728	0.06	4	69.744	-32 48 46.87	0.22	4	69.744				7088
6176	-2	1624	8.2	K0	26 20.507	0.02	2	70.511	-2 28 33.53	0.24	2	70.511				7089
6177	-17	1506	5.94	G5	26 24.480	0.14	2	71.554	-17 25 58.25	0.27	2	71.554		8414		7090
6178	-34	2893	8.4	K2	26 29.784	0.17	4	70.529	-34 20 51.19	0.07	4	70.529				7091
6179	-20	1404	8.5	G5	6 26 30.157	0.09	4	69.422	-20 09 50.17	0.16	4	69.422				7092
6180	-71	441	8.2	K0	26 31.378	0.15	4	69.938	-72 00 40.94	0.37	3	69.633				19008
6181	-45	2523	8.48	F2	26 36.226	0.14	4	70.044	-45 35 09.97	0.18	4	70.044		8417		769
6182	-5	1649	8.7	G0	26 37.375	0.13	2	70.540	-5 32 19.53	0.34	2	70.540				7093
6183	+2	1253	6.39	M0	26 37.983	0.03	2	70.931	+2 40 49.06	0.12	2	70.931		8419		7094
6184	-28	3043	8.5	K0	6 26 44.640	0.11	4	69.244	-28 12 13.95	0.13	4	69.244				7095
6185	-35	2923	8.5	A0	26 49.523	0.07	4	70.480	-35 13 43.05	0.11	4	70.480				7096
6186	-60	626	8.2	G5	26 50.564	0.21	5	71.022	-60 14 40.02	0.20	5	71.022				7097
6187	-8	1448	8.5	M0	26 51.101	0.01	2	70.614	-8 04 00.42	0.21	2	70.614				7098
6188	-14	1466	8.6	K5	26 58.537	0.17	3	72.999	-14 19 25.18	0.32	2	72.958				7099
6189	-7	1438	8.1	K2	6 27 08.227	0.12	2	71.579	-7 19 42.08	0.05	2	71.579				7100
6190	-37	2854	8.1	M0	27 09.513	0.03	5	70.852	-37 18 27.47	0.09	4	70.530				7101
6191	-38	2677	8.2	F0	27 09.934	0.15	4	70.541	-38 16 54.24	0.17	4	70.541				7102
6192	-26	3056	8.1	K5	27 10.694	0.22	4	69.644	-26 05 05.37	0.18	4	69.644				7103
6193	-57	1005	8.7	K0	27 20.567	0.15	5	70.210	-57 18 06.56	0.14	4	70.058				7104
6194	-74	388	9.1	K2	6 27 22.551	0.13	4	70.256	-74 12 31.73	0.18	4	70.256				19009
6195	-49	2270	8.4	G5	27 25.875	0.18	5	71.093	-50 02 49.94	0.07	5	71.093				770
6196	-69	619	8.9	K0	27 26.340	0.06	4	70.037	-69 15 11.95	0.11	4	70.037				19010
6197	-41	2425	9.0	K2	27 28.882	0.09	4	70.716	-41 35 29.92	0.05	4	70.716				771
6198	-36	2936	9.0	G8	27 33.595	0.11	4	70.539	-36 49 02.23	0.09	4	70.539				7105
6199	-42	2553	8.0	K0	6 27 35.950	0.16	4	70.066	-42 38 24.71	0.08	4	70.066				772
6200*	-58	712	8.3	K0	27 39.451	0.16	4	70.315	-58 19 13.15	0.07	4	70.315				7106
6201	-15	1407	8.4	K0	27 45.597	0.14	2	70.469	-15 41 20.12	0.30	2	70.469				7107
6202	-10	1552	7.9	G5	27 46.343	0.04	2	70.516	-10 42 46.97	0.20	2	70.516				7108
6203	-9	1493	6.13	K0	27 49.308	0.08	6	69.500	-10 02 46.68	0.14	6	69.500	2497	8439	1409	32497
6204	-44	2690	8.0	K5	6 27 58.830	0.18	4	70.514	-44 32 22.91	0.07	4	70.514				773
6205	-66	548	8.3	M1	27 59.356	0.26	4	69.559	-66 43 14.97	0.05	4	69.559				19011
6206	-19	1464	6.71	M0	28 01.129	0.01	2	71.395	-19 10 45.95	0.10	2	71.395		8443		7109
6207	+2	1263	8.6	K0	28 12.676	0.12	2	70.473	+2 34 25.94	0.01	2	70.473				7110
6208*	+4	1286	8.9	A0	28 13.261	0.17	4	71.175	+4 41 08.42	0.18	4	71.175				26144
6209	-14	1476	6.79	B8	6 28 13.713	0.07	2	71.516	-14 55 07.75	0.09	2	71.516		8447		7111
6210	-62	650	8.5	K2	28 15.705	0.11	4	70.515	-62 31 22.75	0.09	4	70.515				7112
6211	-59	658	7.7	K0	28 16.513	0.12	4	70.642	-59 44 18.79	0.12	3	70.571				7113
6212	-13	1519	6.09	B3	28 16.604	0.02	2	71.535	-13 06 45.15	0.17	2	71.535		8450		7114
6213	-39	2637	8.4	K5	28 19.994	0.12	4	70.016	-39 43 08.93	0.13	4	70.016				7115

6140 9.1m-9.4m, 1^m1, 178°.6200 SDS, 9.1m-9.2m, 0^m3, 220°.6208 A 5143AB, 9.2m-10.5m, 1^m1, 201°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
6214	+	4	1288	8.1	K0	6 28	23.003	0.02	2	71.528	+ 4 32	41.30	0.26	2	71.528			7116
6215	-	55	1007	8.6	F5	28	26.806	0.08	4	70.458	-55 28	35.18	0.12	4	70.458			7117
6216	-	9	1498	8.7	B8	28	27.352	0.04	2	70.577	- 9 37	05.62	0.01	2	70.577			7118
6217	-	22	1434	7.6	B8	28	31.971	0.03	4	68.974	-22 17	09.72	0.12	4	68.974			7119
6218	-	56	1095	5.16	K0	28	36.320	0.11	6	69.452	-56 49	04.41	0.16	6	69.452	2498	8459	32498
6219	+	4	1290	9.5	A0	6 28	37.725	0.31	3	71.762	+ 4 39	36.70	0.56	3	71.762			7120
6220	-	29	3169	8.7	K5	28	41.322	0.11	4	69.218	-29 59	27.69	0.03	4	69.218			7121
6221	-	27	3051	8.8	B5	28	47.412	0.10	7	70.346	-27 44	00.96	0.12	7	70.346	2499	8463	32499
6222	-	46	2460	9.0	G5	28	48.161	0.14	4	70.029	-46 25	12.25	0.21	4	70.029			774
6223	-	40	2505	8.0	K0	28	52.503	0.17	4	70.060	-40 32	11.82	0.17	4	70.060			775
6224	-	16	1509	8.3	G5	6 28	55.359	0.04	2	71.571	-16 39	43.01	0.12	2	71.571			7122
6225	-	68	530	9.3	G0	29	01.382	0.19	4	69.789	-68 05	43.53	0.21	4	69.789			19012
6226	-	12	1519	8.0	G5	29	04.634	0.21	2	70.548	-12 11	24.52	0.40	2	70.548			7123
6227	-	5	1666	8.0	B9	29	08.571	0.12	2	71.555	- 5 19	54.96	0.14	2	71.555			7124
6228	-	48	2340	8.0	K5	29	14.192	0.21	4	70.494	-48 12	37.10	0.11	4	70.494			776
6229	-	35	2946	8.06	F5	6 29	16.516	0.07	6	70.218	-35 26	30.80	0.16	6	70.218			21005
6230	-	21	1491	8.68	A5	29	21.698	0.12	4	68.649	-21 22	08.20	0.11	4	68.649	8480		7125
6231	-	2	1649	8.7	A0	29	27.250	0.11	3	71.739	- 2 44	43.55	0.44	2	71.538			7126
6232	-	47	2411	8.5	K5	29	34.912	0.07	5	70.516	-47 13	15.16	0.04	4	70.121			777
6233	-	36	2962	6.31	M0	29	50.969	0.13	6	69.617	-36 54	12.16	0.12	6	69.617	2501	8498	1416
6234	-	65	610	6.38	F2	6 29	54.973	0.16	6	70.501	-65 31	56.91	0.15	6	70.501	2502	8499	1417
6235	-	31	3389	8.6	K2	30	03.677	0.05	4	68.924	-31 12	45.10	0.06	4	68.924			32502
6236	-	49	2297	8.5	G5	30	04.484	0.13	4	69.557	-49 43	04.36	0.24	4	69.557			7127
6237	+	7	1337	4.50	A0p	30	11.957	0.02	109	71.845	+ 7 22	16.26	0.03	106	71.858	1174	8506	1420
6238	-	61	668	8.9	G5	30	13.617	0.10	5	69.714	-61 34	16.63	0.16	4	69.438			31174
6239	-	65	611	7.6	K0	6 30	17.840	0.09	4	68.522	-65 59	12.26	0.09	4	68.522			7128
6240	-	23	4004	8.4	K7	30	29.075	0.15	4	69.244	-23 08	50.40	0.22	4	69.244			19013
6241	+	1	1391	7.6	K5	30	30.936	0.20	2	71.485	+ 1 18	42.94	0.16	2	71.485			7129
6242	-	1	1271	8.6	F2	30	33.056	0.01	2	70.526	- 1 39	40.63	0.01	2	70.526			7130
6243	-	34	2939	8.9	G5	30	36.493	0.16	4	69.506	-34 10	54.75	0.10	4	69.506			7131
6244	-	67	609	9.0	G5	6 30	40.418	0.05	4	69.511	-67 33	57.00	0.18	4	69.511			7132
6245	-	24	4153	8.6	K0	30	45.825	0.12	4	69.695	-24 19	48.32	0.07	4	69.695			19014
6246	-	13	1542	8.6	F8	30	55.298	0.19	2	70.577	-14 03	26.61	0.28	2	70.577			7133
6247	-	51	1954	8.5	K0	30	56.909	0.18	4	69.246	-51 40	32.25	0.19	4	69.246			7134
6248	-	1	1274	5.02	B3	31	05.561	0.04	27	71.012	- 1 10	51.03	0.05	26	70.970	1175	8527	1421
6249	-	0	1336	8.6	A0	6 31	10.155	0.07	2	70.572	- 0 13	29.42	0.11	2	70.572			31175
6250	-	17	1533	8.6	G5	31	11.125	0.18	2	71.981	-18 02	15.25	0.13	2	71.981			7135
6251	-	7	1471	8.1	B9	31	15.693	0.23	2	72.037	- 7 09	50.91	0.10	2	72.037			7136
6252	-	43	2534	7.80	K5	31	25.069	0.14	4	70.022	-43 32	15.71	0.24	4	70.022	8534		7137
6253	-	79	220	9.0	K5	31	29.341	0.16	4	69.993	-79 45	49.38	0.15	4	69.993			780
6253 SP						6 31	29.265	0.27	4	70.585	-79 45	49.61	0.45	4	70.585			19015
6254	-	35	2973	9.1	K0	31	30.280	0.06	4	70.713	-35 25	11.13	0.12	4	70.713			7138
6255	+	1	1395	8.8	A2	31	30.488	0.29	2	72.494	+ 1 40	49.90	0.04	2	72.494			7139
6256	-	4	1566	8.5	K5	31	32.207	0.02	2	72.400	- 4 31	42.20	0.05	2	72.400			7140
6257	-	26	3128	7.24	A0	31	38.801	0.15	4	70.334	-26 17	24.54	0.11	4	70.334	8542		7141
6258*	-	28	3133	8.5	F8	6 31	42.333	0.04	4	70.770	-28 50	58.96	0.18	4	70.770			7142
6259	-	70	533	7.41	F8	31	45.665	0.18	4	69.537	-70 28	41.45	0.11	4	69.537	8546		19016
6260	+	2	1295	8.4	B2	31	46.883	0.10	2	71.076	+ 2 34	26.87	0.01	2	71.076			7143
6261	-	5	1689	8.3	B8	31	50.882	0.05	2	73.032	- 5 17	16.89	0.01	2	73.032			7144
6262	-	2	1663	7.09	K2	31	51.439	0.16	2	72.540	- 3 02	02.08	0.01	2	72.540	8550	1423	7146
6263	-	30	3285	8.5	M0	6 31	51.488	0.08	4	71.240	-30 32	35.98	0.08	4	71.240			7145
6264	-	54	1051	8.6	K5	31	53.955	0.12	4	70.051	-54 13	39.97	0.20	4	70.051			7147
6265	-	39	2680	8.0	G5	31	59.248	0.13	4	70.007	-39 36	07.30	0.08	4	70.007			7148
6266	-	44	2742	8.3	K2	32	00.397	0.11	4	70.490	-45 01	26.23	0.14	4	70.490			781
6267	-	59	671	8.7	K0	32	00.553	0.11	5	71.002	-59 13	29.48	0.29	5	71.002			7149
6268	+	8	1402	9.1v	A0	6 32	01.872	0.11	4	72.382	+ 8 51	57.96	0.04	4	72.382			26156
6269	-	7	1474	8.5	K5	32	02.562	0.04	2	70.487	- 7 54	36.91	0.23	2	70.487			7150
6270	+	28	1168	5.05	A0	32	03.089	0.22	6	69.039	+28 03	47.04	0.12	6	69.039	2504	8557	32504
6271	+	3	1307	8.4	F5	32	03.589	--	1	72.878	+ 3 06	50.51	--	1	72.878			7151
6272	-	38	2740	8.1	K0	32	10.426	0.10	5	70.906	-38 48	31.06	0.07	4	70.597			7152
6273*	-	11	1536	7.35	F0	6 32	11.414	0.18	2	72.558	-11 11	21.34	0.05	2	72.558			7153
6274	-	27	3104	8.5	K0	32	15.328	0.05	4	70.737	-27 17	07.82	0.08	4	70.737			7154
6275	-	52	946	8.8	K0	32	16.988	0.09	5	70.120	-52 26	38.95	0.17	4	69.946			7155
6276	-	18	1468	8.3	A3	32	19.817	0.09	2	72.557	-18 46	18.07	0.20	2	72.557			7156
6277	-	4	1571	8.4	A0	32	22.618	0.28	2	71.596	- 4 12	52.49	0.06	2	71.596			7157
6278	+	0	1489	8.6	A0	6 32	24.063	0.05	2	71.460	+ 0 32	41.45	0.12	2	71.460			7158
6279	-	76	402	7.9	K0	32	32.023	0.18	4	69.661	-76 09	47.39	0.09	4	69.661			19017
6279 SP						32	31.975	0.26	4	70.440	-76 09	46.98	0.34	4	70.440			19017
6280	+	10	1186	6.06	K5	32	32.198	0.13	7	70.787	+10 01	45.82	0.15	6	70.723	2505	8567	32505
6281	-	83	128	9.3	G5	32	34.276	0.07	4	69.242	-83 47	47.41	0.17	4	69.242			19018
6281 SP						6 32	34.144	0.12	4	70.473	-83 47	46.55	0.32	4	70.473			19018
6282	-	20	1446	6.85	A0	32	36.854	0.16	3	70.754	-20 31	00.13	0.15	4	71.267	8569		7159
6283	+	4	1331	8.0	A2	32	37.000	--	1	71.886	+ 4 00	36.10	--	1	71.886			7160
6284	-	19	1491	7.6	K5	32	40.997	0.16	3	72.037	-19 36	21.34	0.33	3	72.037			7161
6285	-	12	1547	7.7	F8	32	43.839	0.14	2	72.130	-12 33	55.55	0.16	2	72.130	8572		7162

6258 SDS, 9.6m-9.8m, 0°3, 161°.
6268 9.1m to 11.9m.

6273 A 5212, 8.2m-8.2m, 0°4, 334°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
6286	-32	3168	5.57	B9	6 32 44.002	0.06	7	70.870	-32 40' 32.02	0.10	6	70.862	2506	8573	1427	32506
6287*	+ 4	1332	9.0	K2	32 47.794	0.08	4	71.244	+ 4 30 35.05	0.13	4	71.244				26159
6288	- 0	1350	9.0	A0	32 50.322	0.11	2	71.487	- 0 06 34.16	0.39	2	71.487				7163
6289	-22	1458	4.54	A0	32 57.587	0.02	145	71.056	-22 55 25.58	0.03	141	71.028	249	8577	1429	80249
6290	-21	1509	8.8	K0	32 59.245	0.15	3	71.368	-21 22 07.06	0.23	3	71.368				7164
6291	- 7	1479	8.7	F2	6 33 00.544	0.03	2	70.968	- 7 19 59.44	0.22	2	70.968				7165
6292	-10	1595	8.8	K2	33 02.654	- -	1	72.845	-10 32 34.93	- -	1	72.845				7166
6293	-80	185	8.96	F0	33 03.466	0.30	4	70.533	-80 30 04.89	0.08	4	70.533		8580		19019
6293 SP					33 03.436	0.09	4	71.255	-80 30 05.06	0.61	4	71.255		8580		19019
6294	-31	3437	7.7	K5	33 04.199	0.04	4	71.311	-31 15 01.30	0.13	4	71.311				7167
6295*	+ 2	1302	8.9	B	6 33 06.897	0.12	4	70.460	+ 2 45 13.02	0.17	4	70.460				26161
6296	-33	3084	9.0	G5	33 10.984	0.06	4	70.203	-33 10 30.07	0.13	4	70.203				7168
6297	-15	1446	8.1	F0	33 18.543	0.05	2	72.494	-15 57 57.78	0.12	2	72.494			1431	7169
6298	- 8	1486	7.8	K0	33 19.218	0.03	2	70.548	- 8 57 28.01	0.32	2	70.548				7170
6299	-55	1018	8.8	K2	33 22.636	0.23	4	70.230	-55 11 53.73	0.22	4	70.230				7171
6300	-13	1560	8.9	A0	6 33 30.940	0.07	2	72.031	-13 42 18.76	0.26	2	72.031				7172
6301	-37	2929	7.8	K5	33 37.698	0.14	4	70.475	-37 24 25.60	0.20	4	70.475				7173
6302	-52	953	4.44	A0	33 52.404	0.05	6	70.553	-52 56 02.67	0.06	6	70.553	2508	8604	1433	32508
6303	-48	2384	9.3	K5	33 54.232	0.11	4	70.494	-48 05 35.75	0.15	4	70.494				782
6304	- 5	1707	9.0	K0	33 55.779	0.07	2	70.991	- 5 59 13.26	0.10	2	70.991				7174
6305	-24	4209	8.0	B9	6 34 00.856	0.09	5	70.387	-24 04 35.12	0.14	4	70.698				7175
6306	-44	2771	8.6	K2	34 07.277	0.09	4	70.497	-45 01 48.37	0.07	4	70.497				783
6307	- 5	1710	5.48	B9	34 07.584	0.07	6	70.961	- 5 10 05.70	0.16	6	70.961	2509	8609	1436	32509
6308	-41	2476	8.19	K5	34 09.239	0.10	4	70.432	-41 26 50.73	0.04	4	70.432		8612		784
6309	-32	3187	9.1	G5	34 13.503	0.07	4	70.766	-32 10 45.92	0.23	4	70.766				7176
6310	-73	389	7.92	A5	6 34 14.782	0.11	4	69.983	-73 42 38.41	0.12	4	69.983		8616		19020
6311	-26	3173	8.0	K0	34 15.208	0.19	4	70.665	-26 04 51.65	0.09	4	70.665			1438	7177
6312	-60	659	9.1	K0	34 18.811	0.21	4	70.088	-60 40 20.24	0.39	4	70.088				7178
6313	-62	671	8.2	K0	34 19.222	0.11	4	69.692	-62 31 13.56	0.18	4	69.692				7179
6314	-47	2467	8.5	K0	34 23.406	0.11	5	71.262	-47 14 22.85	0.13	4	71.043				785
6315	-57	1020	8.5	K0	6 34 24.279	0.05	4	70.024	-57 13 22.82	0.16	4	70.024				7180
6316	-53	1115	9.1	K0	34 25.040	0.08	5	70.767	-53 40 07.77	0.18	4	70.755				7181
6317	-19	1502	4.14	K0	34 30.203	0.04	7	71.032	-19 12 43.83	0.17	6	71.051	2510	8624		32510
6318	-12	1559	8.8	B9	34 33.217	0.21	3	71.480	-12 48 29.48	0.13	3	71.480				7182
6319	- 2	1680	7.5	B9	34 34.501	0.06	2	71.510	- 2 08 08.46	0.07	2	71.510				7183
6320	- 2	1681	9.0	K2	6 34 35.023	0.30	2	71.520	- 2 50 36.32	0.31	2	71.520				7184
6321	+ 4	1350	9.0	K0	34 37.453	0.22	3	71.091	+ 4 02 29.97	0.41	3	71.091				7185
6322	-58	739	8.2	K5	34 41.413	0.14	3	71.035	-59 02 42.40	0.29	3	71.035				7186
6323	-42	2617	8.5	K2	34 46.169	0.20	4	70.629	-42 37 38.98	0.07	4	70.629				786
6324	+16	1223	1.93	A0	34 49.469	0.09	14	71.973	+16 26 36.64	0.08	13	71.961	251	8633	1440	30251
6325	-26	3186	9.0	F5	6 34 54.222	0.14	4	69.648	-27 00 30.63	0.13	4	69.648				7187
6326	-64	588	8.3	K2	34 55.133	0.10	3	70.119	-64 58 10.18	0.13	3	70.119				19021
6327	-36	3023	8.3	K1	34 55.571	0.09	5	71.213	-36 08 53.42	0.29	5	71.213				7188
6328	-56	1119	7.65	K0	34 56.810	0.19	4	70.275	-56 11 07.10	0.18	5	70.021		8638		7189
6329	+ 2	1315	6.42	K0	35 03.521	0.05	6	71.020	+ 2 44 54.75	0.11	6	71.020	2512	8642	1441	32512
6330	+ 1	1431	8.6	B9	6 35 04.098	0.07	2	70.485	+ 1 51 20.02	0.13	2	70.485				7190
6331	-28	3201	7.37	K0	35 05.706	0.04	4	69.878	-28 39 44.44	0.11	4	69.878		8643		7191
6332*	+ 9	1310	8.8	F5	35 08.793	- -	1	72.810	+ 8 58 05.93	- -	1	72.810				26169
6333	+19	1418	8.6	G	35 09.442	0.14	4	71.968	+19 55 19.34	0.08	4	71.968				26170
6334	- 3	1517	9.1	A3	35 12.675	0.06	5	71.106	- 3 38 35.73	0.21	4	70.851				26171
6335	-49	2334	8.5	G5	6 35 19.793	0.13	4	70.567	-49 10 40.08	0.15	4	70.567				787
6336	- 0	1367	8.5	B8	35 23.406	0.26	2	70.458	- 0 38 16.27	- -	1	70.061				7192
6337	-31	3489	8.9	K0	35 36.093	0.12	4	69.557	-31 24 34.75	0.13	4	69.557				7193
6338	-40	2579	8.0	K0	35 36.661	0.18	4	70.489	-40 43 35.47	0.25	4	70.489				788
6339	+ 4	1360	8.4	B5	35 44.010	0.04	2	70.581	+ 4 40 08.05	0.02	2	70.581				7194
6340*	-50	2307	7.86	M0	6 35 51.286	0.09	4	69.902	-50 26 18.98	0.07	4	69.902		8665		789
6341	+ 3	1333	8.6	A0	35 56.533	0.04	2	70.630	+ 2 57 54.57	0.01	2	70.630				7195
6342*	- 2	1693	9.1	A2	35 59.908	0.11	4	72.321	- 2 21 50.20	0.08	4	72.321				26173
6343	-34	2993	9.1	M	36 04.744	0.13	5	70.823	-34 15 04.10	0.09	5	70.823				7196
6344	+22	1416	6.28	K0	36 04.812	0.09	7	70.880	+22 04 35.60	0.11	6	70.873	2513	8672	1445	32513
6345	-22	1481	8.4	G5	6 36 10.068	0.13	4	68.648	-22 43 20.65	0.09	4	68.648				7197
6346	-43	2576	3.18	B8	36 13.805	0.03	80	71.306	-43 09 04.26	0.04	79	71.296	252	8675	1447	30252
6347	-64	592	8.3	K0	36 19.080	0.06	4	69.763	-64 39 16.10	0.15	4	69.763				19022
6348	-16	1554	5.93	A0	36 21.671	0.21	2	70.584	-16 49 41.05	0.10	2	70.584		8679		7198
6349	-54	1070	9.0	M0	36 22.049	0.07	4	69.543	-54 56 05.01	0.05	4	69.543				7199
6350	-77	270	6.71	F5	6 36 30.835	0.10	6	70.536	-77 38 40.35	0.03	6	70.536	2514	8684		32514
6350 SP					36 30.729	0.23	6	69.548	-77 38 40.04	0.19	6	69.548	2514	8684		52514
6351	-24	4265	9.00	K2	36 33.114	0.11	4	68.750	-24 55 13.93	0.10	4	68.750		8685		7200
6352	-61	685	8.8	K5	36 42.544	0.08	5	70.224	-61 30 08.38	0.14	4	70.077				7201
6353	-57	1032	8.7	K0	36 47.128	0.16	4	70.085	-57 23 33.18	0.01	4	70.085				7202
6354	- 9	1564	8.7	A2	6 36 49.868	0.27	2	71.476	- 9 19 02.74	0.22	2	71.476				7203
6355	-18	1498	7.38	K5	36 51.478	0.14	2	71.516	-18 08 23.47	0.13	2	71.516		8691		7204
6356	-39	2725	9.1	K2	36 52.327	0.18	4	70.578	-39 25 25.92	0.11	4	70.578				7205
6357	-14	1525	4.97	K0	36 59.550	0.09	7	70.621	-14 05 58.69	0.12	6	70.369	2515	8694		32515
6358	-72	513	9.2	G5	37 06.945	0.11	5	70.471	-72 44 28.01	0.18	5	70.471				19023

6287 A 5219AB, 9.0m-13.0m, 0°9', 24°.

6295 A 5226AB, 9.0m-10.2m, 0°1', 58°.

6332 A 5273AB, 9.5m-9.8m, 0°7', 123°.

6340 8.0m-10.2m, 0°6', 195°.

6342 A 5284AB, 9.6m-9.7m, 0°2', 108°.

CATALOG OF 23,001 STARS FOR 1950.0

323

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
6359	-11	1576	7.2	K0	6 37 07.580	0.18	2	70.587	-11 59 19.41	0.20	2	70.587				7206
6360	-7	1509	9.1	A3	37 13.182	0.08	4	70.289	-7 58 51.79	0.12	4	70.289				26180
6361	-14	1527	8.4	K0	37 13.734	0.12	3	72.047	-14 37 14.33	0.33	3	72.047				7207
6362	-10	1624	8.7	K5	37 13.802	0.13	3	71.739	-10 50 12.91	0.17	2	71.544				7208
6363	-1	1318	8.0	K0	37 14.335	0.12	2	70.582	-1 20 01.10	0.24	2	70.582				7209
6364	-35	3047	7.8	G5	6 37 14.372	0.07	4	70.056	-35 05 25.49	0.19	4	70.056				7210
6365	-46	2571	9.2	K0	37 16.572	0.20	5	71.069	-46 28 09.81	0.12	4	71.311				790
6366	-59	681	8.7	G5	37 19.961	0.10	4	69.512	-59 43 40.37	0.06	4	69.512				7211
6367	-69	639	8.9	K0	37 20.612	0.16	4	69.497	-69 23 57.46	0.26	4	69.497				19024
6368	-37	2974	7.7	K0	37 22.669	0.11	5	71.065	-37 29 11.85	0.12	4	70.797				7212
6369	+5	1356	8.9	A2	6 37 37.871	0.07	2	71.517	+4 57 30.55	0.22	2	71.517				7213
6370	-26	3242	8.6	G0	37 38.355	0.04	4	69.466	-26 35 41.71	0.16	4	69.466				7214
6371	-44	2821	8.8	K0	37 39.560	0.13	4	70.605	-44 07 08.51	0.13	4	70.605				791
6372	-8	1510	8.4	K2	37 41.398	0.19	2	71.515	-8 26 52.86	-	1	72.175				7215
6373	-10	1631	8.3	B9	37 44.537	0.07	2	71.575	-10 15 49.19	0.25	2	71.575				7216
6374f	-4	1610	7.7	K5	6 37 47.147	0.02	2	71.537	-4 24 51.22	0.08	2	71.537				7217
6375	-6	1664	7.0	M0	37 52.390	0.00	2	71.501	-6 17 56.67	0.33	2	71.501				7218
6376	-43	2592	7.27	K5	37 55.296	0.15	4	70.563	-43 22 49.60	0.13	4	70.563		8715		792
6377	-50	2319	8.5	G5	37 56.287	0.12	4	69.268	-51 03 51.41	0.13	4	69.268				793
6378	-29	3331	8.5	F0	38 03.125	0.17	4	69.737	-29 42 43.47	0.15	4	69.737				7219
6379	-18	1504	8.0	A2	6 38 04.192	0.05	2	70.551	-19 02 57.00	0.22	2	70.551				7220
6380	-45	2660	8.5	K2	38 15.772	0.13	4	70.868	-45 30 43.44	0.23	4	70.868				794
6381*	-21	1547	7.4	A3	38 17.145	0.10	4	69.445	-21 20 32.73	0.07	4	69.445				7221
6382	-36	3065	8.0	K0	38 18.716	0.17	4	70.442	-36 54 27.71	0.14	4	70.442				7222
6383	-63	622	8.8	G0	38 31.533	0.09	4	69.734	-63 25 09.62	0.05	4	69.734				7223
6384	+1	1458	8.8	K0	6 38 33.606	0.06	2	71.573	+1 13 45.14	0.33	2	71.573				7224
6385	-74	400	9.2	K0	38 33.720	0.07	4	69.619	-74 45 02.07	0.12	4	69.619				19025
6386	+4	1388	8.2	G0	38 35.632	0.04	2	71.580	+4 11 35.80	0.22	2	71.580		8734		7225
6387	-7	1523	7.6	K2	38 36.854	0.10	2	70.584	-7 31 28.25	0.07	2	70.584				7226
6388	-48	2430	8.5	G5	38 42.370	0.09	4	70.507	-48 29 40.74	0.16	4	70.507				795
6389	-43	2603	8.62	K0	6 38 43.141	0.11	4	69.972	-43 50 18.76	0.12	4	69.972		8738		796
6390	-6	1675	8.6	K5	38 48.131	0.11	2	71.591	-6 35 25.52	0.38	2	71.591				7227
6391	+1	1465	8.2	A0	38 51.001	0.20	2	71.548	+1 00 20.67	0.05	2	71.548				7228
6392	-32	3268	7.7	K0	38 52.857	0.12	4	70.496	-32 43 48.70	0.19	4	70.496				7229
6393	-47	2516	8.5	K0	38 52.871	0.10	5	70.079	-47 14 54.78	0.11	4	70.074				797
6394	-30	3408	8.6	K5	6 39 04.874	0.10	4	69.173	-30 30 15.42	0.06	4	69.173				7230
6395	-38	2823	8.8	K0	39 12.853	0.08	4	69.572	-38 16 42.27	0.14	4	69.572				7231
6396	-22	1494	8.5	K0	39 13.735	0.18	4	69.726	-22 09 54.33	0.14	4	69.726				7232
6397	-20	1494	8.7	F0	39 15.310	0.18	4	69.727	-20 47 56.96	0.09	4	69.727				7233
6398	+2	1356	7.7	K0	39 17.951	0.15	3	72.166	+2 37 50.86	0.09	2	72.179				7234
6399	-0	1398	8.9	K0	6 39 19.952	0.04	2	70.562	-0 14 15.10	0.13	2	70.562				7235
6400	-17	1584	8.0	K5	39 20.999	0.35	2	70.588	-17 29 05.15	0.04	2	70.588				7236
6401	-20	1495	6.83	G5	39 21.268	0.11	4	70.075	-20 16 06.68	0.09	4	70.075		8748		7237
6402	-54	1077	8.7	K5	39 23.969	0.07	4	69.444	-54 25 12.76	0.22	4	69.444				7238
6403	-14	1542	7.8	K2	39 31.665	0.12	3	71.767	-14 25 30.33	0.00	2	71.586				7239
6404	-70	548	9.0	M3	6 39 39.810	0.12	5	69.378	-70 41 50.91	0.12	4	69.018				19026
6405	-27	3210	8.6	K0	39 44.810	0.22	4	69.789	-27 41 32.46	0.27	4	69.789				7240
6406	-33	3156	8.5	K5	39 52.630	0.03	4	70.012	-33 25 13.56	0.22	4	70.012				7241
6407	-3	1557	8.5	K0	39 59.139	0.04	2	71.529	-3 15 18.14	0.21	2	71.529				7242
6408	-77	272	8.50	M3	40 05.588	0.10	4	69.541	-77 29 30.15	0.19	4	69.541		8768		19027
6408 SP					6 40 05.597	0.11	3	69.837	-77 29 30.61	0.32	3	69.837		8768		19027
6409	-3	1560	7.5	A2	40 08.223	0.28	3	72.101	-3 47 09.01	0.13	3	72.101			1457	7243
6410	-9	1606	8.7	A0	40 09.933	0.46	2	71.555	-9 30 59.19	-	1	72.175				7244
6411	-24	4344	8.5	K0	40 19.209	0.26	3	69.926	-24 11 03.77	0.18	3	69.926				7245
6412	-12	1597	8.4	K2	40 21.029	0.02	2	70.526	-12 53 26.44	0.24	2	70.526				7246
6413	-35	3080	9.2	K0	6 40 30.790	0.13	4	70.511	-35 58 42.94	0.18	4	70.511				7247
6414	-49	2382	8.1	F2	40 32.902	0.17	4	70.020	-49 20 11.68	0.14	4	70.020				798
6415	-11	1602	8.2	A0	40 36.792	0.13	2	70.562	-11 42 56.13	0.21	2	70.562				7248
6416	+0	1556	8.0	G5	40 39.425	0.08	2	71.638	+0 01 45.43	0.03	2	71.638				7249
6417	+16	1259	9.0	A5	40 41.175	0.22	3	68.457	+16 29 08.64	0.23	3	68.457				26188
6418	-55	1041	8.6	K0	6 40 41.407	0.13	4	69.770	-55 56 58.88	0.08	4	69.770				7250
6419	-2	1734	8.5	K0	40 43.248	-	1	71.082	-2 42 02.13	-	1	71.082				7251
6420	-46	2611	9.0	G5	40 43.819	0.10	4	70.545	-46 25 24.16	0.16	4	70.545				799
6421	-13	1622	6.97	A0	40 44.508	0.07	2	71.580	-13 38 50.43	0.07	2	71.580		8781		7252
6422	-41	2539	7.64	G5	40 45.019	0.12	5	70.805	-41 40 43.31	0.13	4	70.982		8782		800
6423	+25	1406	3.18	G5	6 40 51.346	0.07	5	69.664	+25 10 56.65	0.19	5	69.664	254	8786	1460	30254
6424f	-42	2683	7.89	G0	40 53.755	0.12	4	70.542	-42 31 17.63	0.22	4	70.542		8788		801
6425	-51	2042	8.0	G5	40 54.792	0.09	4	70.515	-51 42 34.45	0.08	4	70.515				802
6426	-19	1535	8.7	K0	40 56.207	0.23	2	71.994	-19 25 21.78	0.04	2	71.994				7253
6427	-5	1763	9.0	K5	40 57.022	0.19	2	72.382	-5 39 57.79	0.10	2	72.382				7254
6428	-64	604	8.3	G0	6 40 58.908	0.12	4	69.751	-64 18 35.45	0.07	4	69.751				19028
6429	-1	1349	8.0	B8	41 03.863	0.10	2	72.524	-1 17 44.47	0.13	2	72.524				7255
6430	-29	3388	7.12	A0	41 09.043	0.05	4	70.919	-29 11 11.06	0.05	4	70.919		8792	1461	7256
6431	-15	1489	7.7	K2	41 26.935	0.07	2	70.599	-15 59 54.22	0.22	2	70.599			1462	7257
6432*	+6	1369	8.2	B8	41 28.643	0.06	3	72.672	+6 14 44.90	0.07	3	72.672				26190

6374 11.2m, 6"0, 296°.
6381 8.1m-8.4m, 0"4, 357°.

6424 SDS, 8.0m-10.5m, 2"4, 185°.
6432 A 5393AB, 9.0m-9.5m, 0"3, 323°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
6433	+29	1327	5.54	K0	6 41 35.364	0.12	8	72.526	+29 01 23.84	0.31	6	72.665	2518	8799		32518
6434	+2	1370	8.3	K0	41 41.754	0.19	2	72.406	+2 51 36.63	0.10	2	72.406				7258
6435	-71	475	8.0	K0	41 42.864	0.23	4	70.591	-71 04 32.54	0.12	4	70.591				19029
6436	-39	2798	6.30	A3	41 43.110	0.12	7	70.490	-39 08 29.92	0.08	7	70.490	2519	8802	1463	32519
6437	-40	2650	8.0	K5	41 44.407	0.08	3	70.126	-40 51 27.60	0.07	3	70.126				803
6438	-81	194	8.8	K0	6 41 45.226	0.21	6	70.459	-81 37 53.84	0.17	5	70.531				19030
6438	SP				41 45.186	0.05	4	70.470	-81 37 53.97	0.32	4	70.470				19030
6439	-10	1669	8.6	G5	41 48.257	0.24	2	72.052	-10 56 47.86	0.10	2	72.052				7259
6440	-25	3546	6.78	G5	41 51.207	0.06	5	70.253	-25 28 59.78	0.05	5	70.253		8808	1464	7260
6441	-37	3029	7.2	K0	41 54.282	0.12	4	70.584	-37 43 20.40	0.12	4	70.584				7261
6442	-50	2364	9.2	K0	6 41 59.868	0.07	4	70.508	-50 35 58.89	0.14	4	70.508				804
6443	-58	762	7.77	K5	42 05.875	0.08	4	69.057	-58 25 57.25	0.15	4	69.057		8816		7262
6444	-32	3321	7.7	K5	42 06.448	0.18	4	70.576	-32 22 45.23	0.12	4	70.576				7263
6445	-19	1542	7.64	A3	42 20.782	0.08	2	72.439	-19 36 23.50	0.01	2	72.439			1466	7264
6446	-56	1150	9.0	G5	42 22.099	0.10	4	70.608	-56 32 36.67	0.22	4	70.608				7265
6447	-16	1586	8.5	A3	6 42 25.029	0.06	2	71.996	-16 40 34.55	0.25	2	71.996		8818		7266
6448	-30	3480	8.7	G5	42 26.201	0.08	4	70.701	-30 07 08.72	0.17	4	70.701				7267
6449	-52	986	8.5	M1	42 26.448	0.10	4	70.209	-52 58 19.72	0.21	4	70.209				7268
6450	+13	1396	3.40	F5	42 28.801	0.03	58	71.030	+12 57 00.24	0.04	56	71.010	256	8823	1467	80256
6451*	+9	1374	8.5	B9	42 28.889	0.32	2	71.640	+9 44 26.46	0.24	2	71.640				26197
6452	-5	1777	8.0	B8	6 42 32.827	0.02	2	73.018	-5 53 23.51	0.03	2	73.018				7269
6453	-39	2806	9.0	A2	42 37.909	0.05	4	70.540	-39 54 45.78	0.15	4	70.540				7270
6454	-11	1618	8.8	K0	42 45.775	0.18	2	73.216	-11 21 36.18	0.15	2	73.216				7271
6455	-3	1576	9.0	A2	42 47.072	--	1	72.897	-3 53 48.44	--	1	72.897				26199
6456	-27	3248	6.43	F8	42 52.105	0.11	4	70.105	-27 17 27.74	0.17	4	70.105		8831		7272
6457	-63	628	7.91	K0	6 42 52.592	0.18	4	70.996	-63 05 03.59	0.21	4	70.996		8832		7273
6458	-62	703	8.6	K0	42 54.478	0.21	4	71.263	-62 33 51.97	0.24	4	71.263				7274
6459	-38	2871	8.7	K0	42 55.719	0.09	4	70.484	-38 23 02.27	0.07	4	70.484				7275
6460*	-16	1591	--	A0	42 55.678	0.04	25	71.282	-16 39 13.37	0.07	24	71.246	257	8833	1470	30257
6461	-18	1538	6.9	G5	42 57.910	0.02	3	72.083	-18 12 54.07	0.33	3	72.083				7276
6462	-6	1724	8.5	G5	6 43 02.303	0.03	2	72.435	-7 04 58.23	0.25	2	72.435				7277
6463	-14	1569	8.6	K0	43 16.052	0.22	2	72.389	-14 54 13.69	0.16	2	72.389				7278
6464	-0	1421	6.69	A0	43 17.108	0.05	2	72.018	-0 39 45.25	0.17	2	72.018		8842		7279
6465	-51	2058	8.8	K5	43 18.120	0.21	4	70.268	-51 16 09.74	0.08	4	70.268				805
6466	+18	1339	8.3	A2	43 25.597	0.21	5	71.292	+18 15 23.10	0.13	5	71.292				26200
6467	-28	3378	8.8	K0	6 43 26.306	0.16	4	70.981	-28 23 03.41	0.19	4	70.981				7280
6468	+2	1380	8.2	B9	43 32.806	0.22	2	72.002	+2 42 22.42	0.13	2	72.002				7281
6469	-34	3086	9.0	K0	43 34.169	0.11	4	70.966	-34 34 28.27	0.20	4	70.966				7282
6470	-31	3641	8.9	A5	43 40.319	0.07	3	70.334	-31 26 49.08	0.24	3	70.334				7283
6471	-20	1555	7.7	K2	43 48.540	0.16	4	71.279	-20 43 14.86	0.08	4	71.279		8855		7284
6472	+8	1486	5.84	B3	6 43 48.765	0.03	55	71.857	+8 38 29.95	0.04	52	71.862	1177	8856	1472	31177
6473	-52	995	7.8	G5	43 56.734	0.24	5	70.436	-52 18 32.32	0.22	5	70.436				7285
6474	+4	1440	8.02	G5	44 04.658	0.06	3	71.390	+4 24 52.27	0.28	3	71.390			1474	7286
6475	-61	711	6.84	K0	44 09.771	0.10	4	70.038	-61 10 14.43	0.29	4	70.038		8867		7287
6476	-88	67	9.2	K0	44 09.815	0.11	4	70.055	-88 20 34.75	0.09	4	70.055				19031
6476	SP				6 44 10.346	0.15	4	70.347	-88 20 34.58	0.17	4	70.347				19031
6477	-80	196	5.64	A2	44 14.319	0.02	171	71.039	-80 45 47.23	0.03	164	71.023	264	8869	1475	60264
6477	SP				44 14.346	0.03	148	70.894	-80 45 47.29	0.05	144	70.853	264	8869	1475	70264
6478	-9	1644	5.54	A0	44 16.952	0.06	7	70.504	-10 03 08.88	0.17	6	70.240	2521	8873		32521
6479	+10	1263	8.8	F8	44 17.888	0.10	4	72.166	+10 04 04.03	0.07	4	72.166				26202
6480	-45	2732	8.9	G5	6 44 22.347	0.07	4	70.540	-45 56 36.23	0.11	4	70.540				806
6481	-9	1645	8.5	G5	44 27.012	0.23	2	71.513	-9 06 34.39	0.05	2	71.513				7288
6482*	+18	1349	6.16	A0	44 28.136	0.22	5	70.698	+18 14 56.90	0.08	5	70.698		8877		26203
6483	-37	3065	6.10	B5	44 29.165	0.16	6	70.256	-37 43 14.66	0.11	6	70.256		8878		21006
6484	-24	4422	8.5	B9	44 33.321	0.10	4	70.244	-24 05 19.86	0.12	4	70.244				7289
6485	+1	1506	8.6	M0	6 44 36.022	0.16	2	71.555	+1 35 04.66	0.15	2	71.555				7290
6486	-72	522	6.33	K0	44 38.693	0.16	6	70.386	-73 03 50.82	0.17	5	70.229	2522	8881		32522
6486	SP				44 38.683	0.11	18	71.396	-73 03 50.92	0.24	17	71.325	2522	8881		52522
6487*	-18	1550	8.5	K0	44 43.923	0.26	2	71.592	-18 44 21.53	0.09	2	71.592				7291
6488	-12	1623	7.9	K0	44 47.441	0.10	3	71.995	-12 08 37.34	0.30	3	71.995				7292
6489	-36	3143	8.02	K0	6 44 56.415	0.12	4	70.507	-36 32 27.35	0.05	4	70.507		8885		7293
6490	-20	1577	8.0	K0	44 57.280	0.11	4	69.742	-21 02 46.04	0.10	4	69.742		8886		7294
6491	-29	3465	8.5	A0	44 58.403	0.04	4	70.734	-29 33 07.89	0.04	4	70.734				7295
6492	-67	652	8.6	G5	45 06.052	0.08	4	68.695	-67 46 18.11	0.14	4	68.695				19032
6493	-22	1532	8.5	K5	45 09.440	0.05	4	69.761	-22 59 51.74	0.08	4	69.761				7296
6494	-60	700	8.8	K2	6 45 13.142	0.12	4	69.241	-60 12 26.75	0.05	4	69.241				7297
6495	+2	1397	4.70	K0	45 15.148	0.04	35	71.700	+2 28 06.26	0.04	34	71.660	258	8892	1478	30258
6496	-44	2908	8.2	K5	45 18.195	0.09	6	71.028	-44 55 06.93	0.08	4	70.994				807
6497	-49	2425	9.4	K0	45 21.383	0.13	3	71.323	-49 56 28.02	0.20	3	71.323				808
6498	-17	1626	6.94	B9	45 23.204	0.11	2	70.570	-17 27 08.96	0.24	2	70.570		8894		7298
6499	-40	2684	8.0	K2	6 45 24.340	0.12	5	71.440	-40 41 52.18	0.14	5	71.440				809
6500	-25	3628	8.4	G5	45 24.416	0.04	4	69.699	-25 40 09.55	0.08	4	69.699				7299
6501	-47	2575	9.2	F8	45 24.897	0.25	4	71.095	-47 41 25.88	0.33	4	71.095				810
6502	-28	3432	8.1	--	45 30.168	0.12	4	69.978	-28 31 03.42	0.07	4	69.978				7300
6503p	+0	1610	8.3	G0	45 37.480	0.15	2	73.170	+0 21 40.58	0.42	2	73.170				7301

6451 A 5414AB, 8.2m-12.2m, 0°8, 171°.
 6460 Sirius A 5423, 8.4m; Btr.-c.g. =
 -0.201a, -1°32 (FK4), -1.58m.

6482 A 5447, 6.7m-7.2m, 0°6.
 6487 8.9m-10.6m, 0°7, 68°.
 6503 11.5m, 7°0, 150°.

CATALOG OF 23,001 STARS FOR 1950.0

325

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
6504	-66°	602	8.8	K5	6 45 38.118	0.05	5	69.747	-66° 17' 15.68	0.10	3	69.021				19033
6505	-33	3235	8.2	K0	45 38.564	0.11	4	70.779	-33 27 24.28	0.27	4	70.779				7302
6506	-37	3080	5.25	B9	45 38.623	0.06	16	71.266	-37 52 24.82	0.08	16	71.266	1178	8899	1480	31178
6507	-1	1387	8.0	K5	45 50.344	0.24	2	71.990	-1 45 40.24	0.22	2	71.990				7303
6508*	+4	1452	8.9	A5	45 51.094	0.41	2	71.688	+3 54 25.80	--	1	73.238				26206
6509	-58	776	8.32	G5	6 45 51.570	0.12	4	69.593	-58 36 03.47	0.14	4	69.593		8904		7304
6510	-39	2846	8.7	K0	45 52.100	0.11	4	70.630	-39 06 16.71	0.13	4	70.630				7305
6511	-4	1667	8.1	A0	45 54.850	0.02	2	72.524	-4 38 43.17	0.06	2	72.524				7306
6512*	+7	1457	8.4	G5	45 56.999	0.18	4	71.087	+7 40 56.81	0.22	4	71.087				26208
6513	-4	1669	8.8	G8	45 57.438	0.34	2	72.532	-4 45 36.54	0.12	2	72.532				7307
6514	-3	1600	8.5	F5	6 45 59.545	0.11	2	72.573	-3 26 28.68	0.11	2	72.573				7308
6515	-33	3240	9.2	K2	46 00.116	0.04	4	71.041	-33 48 32.60	0.18	4	71.041				7309
6516	-12	1634	6.90	B8	46 08.550	0.14	2	72.552	-12 47 00.49	0.43	2	72.552		8909		7310
6517	-21	1598	7.7	K5	46 09.045	0.05	4	68.684	-21 50 58.72	0.07	4	68.684				7311
6518	+2	1406	8.7	K0	46 10.541	--	1	71.949	+2 04 00.54	--	1	71.949				7312
6519	-10	1709	8.5	B9	6 46 12.031	0.07	2	72.563	-10 47 32.62	0.43	2	72.563				7313
6520*	+7	1461	8.6	F5	46 12.234	0.07	3	71.560	+7 10 11.06	0.11	3	71.560				26209
6521	-42	2740	8.5	G5	46 18.768	0.11	4	70.980	-42 34 51.48	0.04	4	70.980				811
6522	-55	1063	5.62	K2	46 20.231	0.07	6	70.522	-55 29 01.30	0.05	6	70.522	2524	8912		32524
6523	-8	1567	8.5	A0	46 25.096	0.10	2	71.487	-8 15 10.27	0.17	2	71.487				7314
6524	-37	3088	8.3	K2	6 46 27.126	0.11	4	70.739	-37 54 50.13	0.06	4	70.739				7315
6525	-59	704	8.8	K0	46 27.908	0.14	6	70.601	-59 54 23.06	0.13	6	70.601				7316
6526	-14	1597	7.9	K2	46 34.632	0.04	2	72.465	-14 19 54.43	0.23	2	72.465		8917		7317
6527	-27	3292	7.95	B5	46 34.889	0.09	4	70.000	-27 19 25.29	0.16	4	70.000		8918		7318
6528	-38	2914	7.7	K0	46 34.899	0.16	4	70.632	-38 35 57.01	0.12	4	70.632				7319
6529	-47	2591	9.5	G5	6 46 41.039	0.15	4	71.025	-48 02 59.48	0.18	4	71.025				812
6530	-77	280	8.8	G0	46 41.080	0.13	4	69.526	-77 11 30.10	0.13	4	69.526				19034
6530 SP					46 41.136	0.14	4	69.491	-77 11 29.94	0.24	4	69.491				19034
6531	-55	1065	9.1	G5	46 44.484	0.04	4	69.738	-55 20 02.24	0.06	4	69.738				7320
6532	-2	1776	5.65	A0	46 45.251	0.02	75	71.073	-2 12 50.78	0.04	71	71.055	1179	8923	1483	81179
6533	+3	1414	7.8	K0	6 46 51.475	0.07	2	72.603	+3 44 59.73	0.21	2	72.603				7321
6534	+16	1298	5.69	B8	46 57.099	0.07	7	71.666	+16 15 40.45	0.16	6	71.589	2526	8927	1484	32526
6535	-64	623	8.4	K0	47 02.386	0.11	4	70.071	-65 01 54.79	0.13	4	70.071				19035
6536	-7	1578	7.8	K2	47 10.492	0.08	2	73.028	-7 21 14.51	0.04	2	73.028				7324
6537	-56	1165	8.2	K5	47 23.777	0.24	4	70.589	-56 15 37.70	0.15	4	70.589				7326
6538	-57	1059	7.34	K0	6 47 25.218	0.14	4	70.821	-57 35 54.92	0.14	4	70.821		8934		7327
6539	-5	1815	7.30	B5	47 28.055	0.01	2	70.973	-5 27 16.98	0.33	2	70.973			1486	7328
6540	-16	1618	8.2	K5	47 30.112	0.10	2	72.536	-16 15 04.67	0.02	2	72.536				7329
6541	-70	566	8.5	K2	47 33.059	0.25	5	70.845	-70 24 40.87	0.12	5	70.845				19036
6542	-17	1641	8.6	A2	47 34.091	0.28	2	72.591	-17 30 33.11	0.34	2	72.591				7330
6543	-53	1163	7.8	F0	6 47 34.705	0.12	5	70.938	-53 57 23.23	0.21	5	70.938				7331
6544	-61	720	3.30	A5	47 40.482	0.03	59	70.684	-61 53 08.73	0.04	54	70.621	262	8941	1487	30262
6545	-2	1784	9.0	A5	47 45.591	0.11	3	71.587	-3 00 43.31	0.08	3	71.587				26215
6546	-31	3707	8.3	G5	47 46.394	0.03	5	70.820	-31 12 01.79	0.11	5	70.820				7332
6547	-24	4480	8.6	A2	47 46.555	0.11	4	70.841	-24 56 20.51	0.15	4	70.841				7333
6548	+16	1305	9.0	F8	6 47 57.848	0.16	2	73.218	+16 17 52.61	0.44	2	73.218				26216
6549	-32	3404	3.78	B2p	47 58.300	0.04	55	70.771	-32 26 58.42	0.04	53	70.775	1180	8946	1488	31180
6550	-27	3310	6.77	B3	48 05.924	0.08	6	71.418	-27 16 29.46	0.12	6	71.418	2528	8950	1489	32528
6551	-26	3455	8.5	K0	48 14.782	0.19	4	70.316	-26 42 43.40	0.13	4	70.316				7334
6552	-50	2412	8.8	K5	48 27.982	0.09	4	70.716	-50 53 59.32	0.14	4	70.716				813
6553	-42	2765	8.35	K2	6 48 28.649	0.06	4	70.511	-42 05 09.64	0.15	4	70.511		8959		814
6554	-46	2703	5.05	F2	48 29.872	0.10	7	71.249	-46 33 29.79	0.22	7	71.249	2529	8960		32529
6555	+21	1405	5.22	A0	48 33.233	0.16	7	71.110	+21 49 18.20	0.13	6	70.947	2530	8965		32530
6556	-25	3693	8.9	F2	48 37.298	0.12	4	70.831	-25 21 43.57	0.05	4	70.831				7335
6557	-50	2415	2.83	K0	48 41.746	0.03	72	71.232	-50 33 16.67	0.04	72	71.241	263	8969	1491	30263
6558	-20	1603	7.09	B3	6 48 43.803	0.13	4	70.764	-20 51 01.43	0.08	4	70.764		8970		7336
6559	-17	1650	8.4	G5	48 45.559	--	1	70.072	-17 47 43.09	--	1	70.072				7337
6560	-9	1680	7.36	K5	48 49.879	0.08	3	71.053	-10 01 28.91	0.27	2	71.532		8973		7338
6561	-19	1585	8.0	G5	48 51.022	0.10	2	70.572	-19 31 37.29	0.38	2	70.572				7339
6562	-30	3593	8.9	K5	48 51.424	0.10	4	70.934	-30 31 03.10	0.25	3	71.304				7340
6563	+2	1437	7.13	F5	6 48 59.461	0.13	2	70.688	+2 42 42.89	0.02	2	70.688		8977		7341
6564	-32	3420	8.9	F5	49 00.637	0.08	4	70.562	-32 54 41.43	0.18	4	70.562				7342
6565	-36	3181	8.0	K0	49 00.935	0.11	4	70.507	-36 55 22.66	0.15	4	70.507				7343
6566	-43	2732	9.1	K0	49 03.912	0.05	4	70.720	-43 26 08.97	0.06	4	70.720				815
6567	-34	3142	9.1	K5	49 08.890	0.13	4	70.573	-35 04 53.67	0.22	4	70.573				7344
6568	-34	3144	7.91	K2	6 49 16.371	0.10	5	70.918	-34 12 58.66	0.15	4	70.623		8985		7345
6569	-23	4478	8.2	K5	49 19.930	0.05	4	69.457	-23 35 09.07	0.13	4	69.457				7346
6570	-12	1661	8.7	K2	49 20.444	0.13	4	72.071	-12 39 09.50	0.07	3	71.735				7347
6571	-49	2459	9.0	K0	49 30.020	0.12	4	70.851	-49 55 12.47	0.15	4	70.851				816
6572	-72	534	9.0	G5	49 35.590	0.14	4	70.075	-72 24 05.97	0.28	4	70.075				19037
6573	-29	3565	7.9	K0	6 49 35.675	0.13	4	69.412	-29 18 51.33	0.17	4	69.412			1496	7348
6574	-0	1468	8.7	B8	49 36.910	0.16	2	71.546	-0 14 03.35	0.11	2	71.546				7349
6575	-47	2628	7.10	K0	49 44.047	0.10	4	70.535	-47 15 56.27	0.23	4	70.535		8996		817
6576	+1	1565	8.6	K5	49 47.409	0.18	2	71.581	+1 04 19.05	0.14	2	71.581				7350
6577	-22	1568	8.1	G5	49 48.108	0.08	4	69.741	-22 14 32.24	0.21	4	69.741				7351

6508 A 5465AB, 9.4m-9.4m, 0°2, 325°.

6512 A 5469AB, 8.7m-9.5m, 0°5.

6520 A 5475AB, 9.5m-9.6m, 0°1, 171°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
6578	-68	568	9.0	K	6 49 52.672	0.17	4	69.716	-68 27 25.86	0.13	4	69.716	2531	9004		19038
6579	-66	608	6.99	G5	49 57.165	0.10	7	70.281	-66 14 00.37	0.10	6	70.175				32531
6580	-15	1546	8.4	K0	49 57.450	0.20	2	71.532	-15 08 50.53	0.02	2	71.532				7352
6581	-46	2723	8.5	K2	49 58.234	0.13	4	69.999	-46 45 18.81	0.24	4	69.999				818
6582	-27	3343	8.5	G5	50 05.554	0.06	4	69.516	-27 55 04.45	0.11	4	69.516				7353
6583	-16	1638	6.99	B5	6 50 31.177	0.03	2	71.506	-16 09 00.60	0.13	2	71.506		9011		7354
6584	-11	1673	7.5	A2	50 34.924	0.12	3	71.738	-12 05 31.85	0.10	3	71.738				7355
6585	-25	3730	7.0	K5	50 39.330	0.05	4	69.195	-26 03 15.73	0.05	4	69.195				7356
6586	-54	1134	8.3	K5	50 41.695	0.14	4	69.165	-54 18 53.04	0.18	3	68.601				7357
6587	+ 4	1489	8.1	K2	50 51.581	0.13	2	70.953	+ 4 14 12.92	0.46	2	70.953				7358
6588	-15	1550	8.7	M0	6 51 00.016	0.07	2	72.495	-15 24 35.26	0.06	2	72.495				7359
6589	-74	419	9.0	K0	51 02.542	0.07	4	69.044	-74 29 49.71	0.09	4	69.044				19039
6590	- 0	1476	8.8	G0	51 09.607	0.02	2	70.992	- 0 27 33.91	0.04	2	70.992				7360
6591	-82	161	7.63	F0	51 18.776	0.17	4	69.944	-82 50 15.85	0.32	4	69.944		9031		19040
6591	SP				51 18.774	0.19	4	70.394	-82 50 15.96	0.24	4	70.394		9031		19040
6592	-38	2992	8.8	K0	6 51 22.580	0.16	3	69.690	-38 54 36.47	0.19	3	69.690	2532	9034	1498	7361
6593	-20	1616	4.66	B1	51 23.107	0.11	6	70.529	-20 09 39.95	0.12	6	70.529				32532
6594	-40	2754	9.0	K0	51 26.144	0.11	4	70.034	-40 27 16.95	0.06	4	70.034				819
6595	-39	2912	8.2	K2	51 26.778	0.22	4	70.521	-39 37 38.94	0.16	4	70.521				7362
6596	-11	1678	7.7	K0	51 26.883	0.25	2	70.554	-11 12 01.76	0.27	2	70.554				7363
6597	- 4	1714	8.3	K5	6 51 27.287	0.02	2	72.518	- 4 19 44.34	0.00	2	72.518		9037		7364
6598	-32	3460	8.8	K0	51 44.118	0.14	4	70.064	-32 23 26.04	0.08	4	70.064				7365
6599	- 6	1806	8.9	F5	51 45.334	0.08	4	71.363	- 6 18 38.69	0.08	4	71.363				26228
6600	-82	160	8.6	G5	51 49.849	0.10	5	69.965	-82 07 33.70	0.12	4	70.171				19041
6600	SP				51 49.887	0.16	4	70.016	-82 07 33.52	0.16	4	70.016				19041
6601	-18	1596	8.7	B9	6 51 50.025	0.04	2	72.507	-18 30 05.05	0.05	2	72.507	266	9051	1502	7366
6602	-11	1681	4.25	K2	51 51.758	0.02	115	71.394	-11 58 28.90	0.03	113	71.391	2533	9052		80266
6603	- 0	1487	5.33	A2	51 52.150	0.06	8	71.341	- 0 03 46.74	0.08	6	71.084				32533
6604	- 7	1624	8.9	K2	51 56.106	0.01	2	72.573	- 7 19 55.47	0.01	2	72.573				7367
6605	-70	572	5.52	B8	52 01.648	0.03	88	71.150	-70 54 04.69	0.04	85	71.139	267	9057	1503	30267
6605	SP				6 52 01.576	0.09	37	71.226	-70 54 04.74	0.18	36	71.249	267	9057	1503	50267
6606	-51	2139	8.5	K0	52 02.548	0.10	4	70.050	-51 49 13.90	0.09	4	70.050				820
6607	-52	1028	8.6	K0	52 03.377	0.18	5	70.875	-52 07 42.95	0.08	5	70.875				7368
6608	-69	668	8.5	K5	52 08.754	0.16	4	69.494	-69 21 12.58	0.12	4	69.494				19042
6609	-36	3219	7.5	G5	52 11.295	0.09	5	70.863	-36 29 34.41	0.05	4	70.544				7369
6610	-19	1601	8.8	G5	6 52 12.178	0.11	2	72.580	-19 24 04.36	0.44	2	72.580				7370
6611	-77	284	8.46	G5	52 14.953	0.07	5	70.988	-78 01 44.46	0.09	5	70.988		9065		19043
6611	SP				52 15.024	0.36	4	70.522	-78 01 44.83	0.13	4	70.522		9065		19043
6612	- 1	1447	8.6	K0	52 16.599	0.17	2	72.518	- 1 13 05.08	0.01	2	72.518				7371
6613	-75	413	9.4	K0	52 18.780	0.55	4	69.940	-75 39 31.54	0.14	4	69.940				19044
6613	SP				6 52 18.801	0.29	4	71.074	-75 39 31.03	0.37	4	71.074				19044
6614	+ 2	1460	8.2	K0	52 21.789	0.04	2	72.450	+ 2 06 26.88	0.05	2	72.450				7372
6615	-17	1673	8.2	B8	52 23.142	0.26	2	72.502	-17 51 10.24	0.19	2	72.502				7373
6616	-66	618	9.3	G0	52 24.131	0.26	4	69.662	-66 45 46.19	0.02	4	69.662				19045
6617	- 5	1868	8.7	K5	52 25.861	0.17	2	72.049	- 5 46 25.23	0.25	2	72.049				7374
6618	-64	629	9.2	K5	6 52 26.215	0.08	4	70.571	-64 38 40.26	0.08	4	70.571				19046
6619	+ 4	1506	8.5	K0	52 28.091	0.10	2	72.000	+ 4 41 19.21	0.02	2	72.000				7375
6620	-31	3782	8.8	K5	52 31.720	0.12	4	68.880	-31 14 00.04	0.12	4	68.880				7376
6621	-14	1637	8.4	F8	52 36.631	0.10	3	72.164	-14 47 51.43	0.24	3	72.164				7377
6622	-21	1645	8.9	A2	52 37.551	0.17	4	68.767	-21 48 22.63	0.19	4	68.767				7378
6623	- 2	1829	7.8	K0	6 52 37.761	0.14	3	71.796	- 2 24 59.12	0.10	2	71.646				7379
6624	-44	2998	8.5	K0	52 43.941	0.16	4	70.545	-44 18 56.10	0.07	4	70.545				821
6625	-48	2587	9.5	K0	52 48.337	0.20	4	70.818	-48 09 15.84	0.12	4	70.818				822
6626	-42	2818	6.00	N0	52 52.155	0.13	6	69.231	-42 18 04.51	0.06	6	69.231	2534	9077	1506	32534
6627	- 8	1620	8.0	K2	52 55.809	0.19	2	70.557	- 8 34 36.64	0.24	2	70.557				7380
6628	-32	3479	9.3	G5	6 52 59.158	0.10	5	70.822	-32 57 16.43	0.15	4	71.003				7381
6629	-37	3161	8.6	K5	52 59.472	0.22	4	70.066	-37 18 26.02	0.12	4	70.066				7382
6630	-42	2820	8.5	K0	53 10.193	0.15	4	70.473	-42 40 53.81	0.14	4	70.473				823
6631	+ 2	1467	8.4	N0	53 23.611	0.01	2	70.521	+ 2 25 28.70	0.38	2	70.521		9093		7383
6632	- 2	1835	8.6	B8	53 30.271	0.05	2	71.487	- 3 06 31.76	0.11	2	71.487				7384
6633	-13	1735	8.4	G5	6 53 30.967	0.04	2	70.525	-13 40 39.56	0.28	2	70.525				7385
6634	-62	731	8.7	K2	53 32.317	0.14	4	70.533	-63 00 52.76	0.13	4	70.533				7386
6635	-65	670	8.0	M1	53 35.740	0.11	5	70.420	-65 50 57.93	0.29	3	69.724				19047
6636	-41	2659	9.1	K0	53 37.310	0.11	4	70.054	-41 40 20.62	0.18	4	70.054				824
6637	-22	1602	5.26	B0	53 40.629	0.11	4	68.911	-22 52 32.22	0.10	4	68.911		9099	1507	7387
6638	+10	1335	5.88	B8	6 53 40.681	0.09	6	69.283	+10 01 22.38	0.06	6	69.283	2535	9100	1508	32535
6639	+ 3	1466	8.6	A0	53 42.235	0.15	2	71.593	+ 3 11 43.65	0.12	2	71.503				7388
6640*	-62	732	8.5	G5	53 42.576	0.07	4	70.238	-62 23 54.00	0.10	4	70.238				7389
6641	-45	2817	9.0	K0	53 44.932	0.08	4	70.068	-45 32 49.82	0.06	4	70.068				825
6642p	-25	3804	7.29	F0	53 50.105	0.23	4	69.465	-25 27 08.49	0.06	4	69.465		9105		7390
6643	-16	1661	4.39	B5	6 53 54.351	0.10	6	69.389	-16 59 17.11	0.10	6	69.389	2536	9107	1509	32536
6644	-83	142	7.75	F5	53 56.116	0.09	4	69.975	-83 55 54.09	0.11	4	69.975		9110		19048
6644	SP				53 56.204	0.10	4	70.477	-83 55 54.30	0.31	4	70.477		9110		19048
6645	+ 0	1717	8.0	K0	53 59.415	0.21	2	70.584	+ 0 10 21.64	0.10	2	70.584				7391
6646	- 3	1653	8.5	K5	54 04.612	--	1	70.077	- 3 43 05.01	--	1	70.077				7392

6640 9.0m-9.0m, 0°2, 69°.

6642 A 5606, 10.4m, 3°7, 97°.

6650 A 5617AB, 9.6m-9.7m, 0°2, 297°.

CATALOG OF 23,001 STARS FOR 1950.0

327

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
6647	-46°	2765	8.5	K5	6 54 06.771	0.13	4	70.071	-46° 23' 55.51"	0.21	4	70.071				826
6648	-79	235	8.89	K0	54 10.224	0.06	4	70.021	-80 04 21.73	0.19	4	70.021		9117		19049
6648	SP				54 10.181	0.39	4	70.514	-80 04 21.64	0.24	4	70.514		9117		19049
6649	-35	3219	8.6	K0	54 15.384	0.12	4	69.710	-35 38 07.07	0.13	4	69.710				7393
6650*	+ 9	1452	8.5	A7	54 23.585	0.20	4	71.455	+ 9 08 57.16	0.08	4	71.455				26238
6651	-22	1609	7.8	K0	6 54 27.412	0.06	4	69.249	-22 34 41.60	0.12	4	69.249				7394
6652	-68	578	8.9	K0	54 30.842	0.13	4	69.819	-68 53 23.74	0.14	4	69.819				19050
6653	-71	500	8.7	K5	54 30.932	0.05	4	70.020	-71 31 54.39	0.10	4	70.020				19051
6654	-49	2513	8.5	M0	54 37.444	0.16	4	69.519	-50 01 10.54	0.05	4	69.519				827
6655	-53	1194	8.5	K0	54 41.090	0.09	4	69.522	-53 33 28.17	0.08	4	69.522				7395
6656	+19	1553	9.0	A2	6 54 42.803	0.17	4	72.068	+19 39 07.71	0.27	4	72.068				26241
6657	-24	4635	8.22	K5	54 50.065	0.12	4	69.691	-24 54 07.33	0.05	4	69.691		9135		7396
6658	-19	1622	6.75	P5	54 50.817	0.01	2	71.483	-19 22 15.94	0.47	2	71.483		9136		7397
6659	-35	3225	6.28	K0	54 57.895	0.12	4	69.977	-35 16 27.03	0.13	4	69.977		9138		7398
6660	-67	676	8.8	M5	54 59.076	0.11	4	69.478	-67 50 00.21	0.13	4	69.478				19052
6661	-43	2807	8.7	G5	6 55 01.434	0.09	5	70.355	-43 41 45.06	0.06	4	70.419				828
6662	-58	801	9.1	K0	55 02.426	0.15	4	69.568	-58 20 37.13	0.15	4	69.568				7399
6663	-16	1673	8.0	G5	55 08.012	0.02	2	71.506	-16 19 05.00	0.08	2	71.506				7400
6664	-34	3221	8.0	K2	55 08.945	0.21	4	69.986	-34 19 33.23	0.18	4	69.986				7401
6665	- 7	1649	8.7	G5	55 11.961	0.01	2	70.557	- 7 43 55.62	0.10	2	70.557				7402
6666	-32	3509	9.1	K0	6 55 12.786	0.16	4	69.580	-32 22 24.54	0.14	4	69.580				7403
6667	-23	4640	8.7	K0	55 15.173	0.18	4	69.690	-23 25 53.63	0.10	4	69.690				7404
6668	-29	3691	8.5	K0	55 16.535	0.15	4	69.606	-29 25 35.19	0.13	4	69.606				7405
6669	-30	3722	9.0	K5	55 16.814	0.07	4	70.258	-30 25 32.75	0.15	4	70.258				7406
6670	-12	1714	8.3	K0	55 19.825	0.29	2	70.602	-12 16 02.02	0.08	2	70.602				7407
6671	-55	1104	9.0	G0	6 55 23.996	0.11	4	69.550	-56 01 22.92	0.09	4	69.550				7408
6672	-61	741	8.7	K2	55 34.482	0.17	4	70.060	-61 39 46.81	0.03	3	69.795				7409
6673	+ 3	1484	8.8	M2	55 40.265	0.19	2	71.589	+ 3 34 32.19	0.26	2	71.589				7410
6674	- 4	1750	8.8	F0	55 43.881	0.16	2	71.595	- 5 00 22.74	0.10	2	71.595				7411
6675	-14	1664	8.2	K5	55 44.600	0.27	2	71.485	-14 45 05.27	0.09	2	71.485				7412
6676	-54	1152	8.9	K0	6 55 45.745	0.11	4	69.522	-54 43 41.91	0.02	4	69.522				7413
6677*	- 0	1517	8.9	A2	55 50.225	0.11	4	70.494	- 0 16 52.43	0.17	4	70.494				26243
6678	- 4	1752	8.0	A5	55 55.528	0.08	3	72.450	- 4 27 23.39	0.07	3	72.450				7414
6679	-17	1705	8.0	K0	56 00.890	0.11	2	71.608	-17 42 38.05	0.06	2	71.608				7415
6680	-11	1714	8.8	A2	56 07.252	0.12	2	71.671	-11 21 43.79	0.26	2	71.671		9166		7416
6681	-55	1111	8.32	K0	6 56 13.493	0.05	4	69.531	-55 50 48.67	0.19	4	69.531		9169		7417
6682	+18	1435	8.3	K0	56 14.793	0.07	4	72.593	+18 47 23.44	0.05	4	72.593				26248
6683	+ 3	1488	6.02	K0	56 19.184	0.10	6	72.860	+ 3 40 18.13	0.18	6	72.860	2540	9175	1512	32540
6684	-44	3046	9.0	K0	56 29.045	0.08	4	69.509	-44 31 42.54	0.17	4	69.509				829
6685	- 9	1768	8.2	K0	56 30.885	0.10	2	71.698	- 9 58 17.63	0.39	2	71.698				7418
6686	-26	3658	7.90	K5	6 56 34.811	0.09	4	69.161	-26 38 40.63	0.15	4	69.161		9183		7419
6687	-20	1654	8.1	K5	56 35.025	0.11	4	70.059	-20 32 45.12	0.10	4	70.059				7420
6688	-33	3389	5.07	B5	56 35.178	0.10	6	71.690	-34 02 33.65	0.09	6	71.690	2541	9184	1514	32541
6689	-39	2977	8.8	K5	56 38.749	0.13	4	69.531	-39 54 22.54	0.12	4	69.531				7421
6690p	-28	3666	1.63	B1	56 39.579	0.05	26	70.396	-28 54 10.22	0.07	25	70.323	268	9188	1515	30268
6691	-60	730	8.41	G5	6 56 48.545	0.10	5	70.431	-60 46 58.75	0.08	5	70.431		9189		7422
6692	- 5	1900	8.2	A0	56 51.953	0.15	2	72.085	- 5 20 24.59	0.28	2	72.085				7423
6693	+ 1	1622	7.69	K0	56 56.944	0.26	2	72.036	+ 0 59 12.44	0.04	2	72.036				7424
6694*	+16	1352	7.01	G0	56 58.259	0.07	4	72.180	+16 00 40.67	0.18	4	72.180		9192		26250
6695	-13	1764	8.6	F0	57 10.435	0.16	2	72.524	-13 37 38.78	0.05	2	72.524				7425
6696*	- 8	1658	8.1	F5	6 57 12.890	0.07	2	72.060	- 8 19 10.84	0.07	2	72.060				7426
6697	+ 0	1744	8.8	A0	57 13.020	0.02	2	73.031	+ 0 20 55.27	0.33	2	73.031				7427
6698	-52	1045	8.1	K3	57 17.810	0.09	4	70.059	-53 01 57.50	0.16	4	70.059				7428
6699	+ 4	1536	8.0	K0	57 18.781	0.07	2	70.981	+ 4 09 13.96	0.05	2	70.981				7429
6700	-46	2812	8.5	K0	57 39.055	0.14	4	69.570	-46 07 24.09	0.11	4	69.570				830
6701	+ 2	1499	8.0	K2	6 57 39.209	0.03	2	72.069	+ 2 34 58.78	0.14	2	72.069				7430
6702*	-51	2201	9.0	G0	57 50.223	0.21	4	70.563	-51 37 18.22	0.08	4	70.563				831
6703	- 2	1873	8.2	K0	57 51.394	-	1	73.214	- 2 21 39.74	-	1	73.214				7431
6704	- 8	1662	5.84	A0	57 59.544	0.10	9	71.715	- 8 20 08.73	0.12	9	71.715	1181	9226	1523	31181
6705	-19	1645	6.90	K0	58 04.510	0.02	2	73.024	-19 43 48.63	0.24	2	73.024		9229		7432
6706	-29	3749	7.14	K2	6 58 06.351	0.09	5	71.230	-30 00 25.39	0.25	5	71.230		9230		7433
6707	-31	3888	8.4	G0	58 08.093	0.05	4	71.046	-31 09 26.79	0.16	4	71.046				7434
6708*	-21	1695	6.33	B5	58 11.830	0.14	5	71.447	-22 02 52.37	0.03	2	71.375		9232		7435
6709	-50	2503	9.5	K0	58 12.440	0.18	3	70.988	-50 09 47.44	0.17	3	70.988				832
6710	-30	3778	7.9	K0	58 20.704	0.12	4	72.048	-30 36 26.91	0.19	4	72.048				7436
6711	-73	419	9.4	K0	6 58 22.658	0.23	5	71.377	-73 38 22.33	0.19	5	71.377				19053
6712	- 0	1542	8.4	A2	58 23.096	0.28	2	72.067	- 0 35 51.07	0.03	2	72.067				7437
6713	-57	1099	8.2	K2	58 28.746	0.14	4	70.486	-57 55 53.49	0.13	3	70.363				7438
6714	-42	2882	8.5	K0	58 31.223	0.05	4	70.265	-42 48 43.59	0.09	4	70.265				833
6715	- 1	1504	9.0	M2	58 45.050	0.10	2	72.472	- 2 04 59.09	0.37	2	72.472				7439
6716	-61	751	8.8	K5	6 58 45.836	0.19	4	70.825	-62 05 10.74	0.12	4	70.825				7440
6717	-27	3520	8.0	K2	58 47.831	0.07	4	71.224	-27 42 07.87	0.13	4	71.224				7441
6718	-34	3262	8.9	K0	58 48.214	0.06	5	71.491	-34 51 20.65	0.29	4	71.328				7442
6719	-43	2860	8.0	K2	58 50.276	0.11	4	70.611	-43 25 44.07	0.17	4	70.611				834
6720	-37	3235	7.6	G5	58 51.342	0.17	4	70.595	-37 57 51.15	0.11	4	70.595				7443

6677 A 5635AB, 9.2m-10.0m, 0°3, 171°.

6690 A 5654, 7.5m, 7°5, 161°.

6694 A 5660, 7.2m-8.7m, 0°3, 320°.

6696 A 5665, 8.6m-9.8m, 0°8, 152°.

6702 SDS, 9.8m-10.2m, 0°3, 85°.

6708 A 5687, 7.1m-7.1m, 0°1.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
6721	-8	1674	8.8	F5	58 53.119	0.09	5	71.583	-9 01' 48.35	0.10	4	71.678				26255
6722	-76	428	8.9	K0	58 57.347	0.22	5	70.979	-76 34 25.55	0.16	4	71.200				19054
6722	SP				58 57.036	0.68	4	70.981	-76 34 25.04	0.34	4	70.981				19054
6723	-6	1885	8.1	K5	59 03.540	0.12	2	71.961	-6 51 59.04	0.01	2	71.961				7444
6724	-48	2647	9.2	K0	59 05.655	0.09	4	71.188	-48 39 30.88	0.16	4	71.188				835
6725	-22	1660	8.5	K0	59 16.119	0.11	4	70.610	-23 07 03.82	0.15	4	70.610				7445
6726	-36	3299	8.4	K0	59 17.535	0.06	4	70.546	-36 33 39.16	0.09	4	70.546				7446
6727	-19	1651	8.6	A3	59 17.980	0.20	2	71.470	-19 07 40.53	0.17	2	71.470				7447
6728	+24	1502	5.21	K0	59 22.014	0.05	38	70.937	+24 17 18.40	0.06	35	70.861	1182	9263	1527	81182
6729	-38	3095	8.6	G5	59 27.723	0.14	4	70.546	-38 21 03.27	0.17	4	70.546				7448
6730	-25	3923	8.5	K0	59 28.653	0.08	3	70.995	-25 27 40.98	0.12	3	70.995				7449
6731	+17	1479	6.20	M0	59 31.057	0.10	7	71.331	+17 49 42.61	0.10	7	71.331	2543	9270		32543
6732	-27	3540	6.66	B0	59 33.012	0.14	4	70.571	-27 09 00.94	0.15	4	70.571		9271		7450
6733	-8	1681	8.8	G5	59 33.771	0.08	2	72.406	-8 14 10.41	0.21	2	72.406				7451
6734	-59	742	8.5	K0	59 35.956	0.10	4	71.013	-59 53 21.65	0.17	4	71.013				7452
6735	-15	1608	7.9	K5	59 36.563	0.06	2	70.574	-15 18 42.66	0.07	2	70.574				7453
6736	-51	2224	5.02	M0	59 38.535	0.13	6	71.598	-51 19 49.24	0.16	6	71.598	2544	9273		32544
6737	-27	3544	3.68	K5	59 43.557	0.03	47	70.984	-27 51 43.19	0.05	46	70.960	1183	9276	1529	81183
6738	-17	1733	7.5	A2	59 43.860	0.11	2	72.054	-17 34 15.85	0.06	2	72.054			1530	7454
6739	-33	3428	8.5	K0	59 44.759	0.06	4	70.623	-33 17 09.55	0.14	4	70.623				7455
6740	-35	3279	7.3	K0	59 45.090	0.12	4	70.453	-35 16 31.60	0.10	4	70.453				7456
6741	-79	238	5.51	A0	59 45.929	0.17	6	72.046	-79 21 00.85	0.30	6	72.046	2545	9278	1531	32545
6741	SP				59 45.932	0.11	6	68.927	-79 21 00.55	0.20	6	68.927	2545	9278	1531	52545
6742	-49	2565	7.0	K0	59 46.684	0.08	4	70.486	-49 38 09.78	0.10	4	70.486				836
6743	-80	209	7.98	K5	59 48.016	0.09	4	70.412	-80 46 07.94	0.15	4	70.412		9279		19055
6743	SP				59 47.947	0.19	4	70.573	-80 46 07.86	0.30	4	70.573		9279		19055
6744	-12	1745	8.6	K0	59 49.212	0.08	2	72.546	-12 25 53.70	0.28	2	72.546				7457
6745	+3	1516	8.5	F0	59 51.191	0.01	2	72.477	+3 34 19.53	0.13	2	72.477				7458
6746	-14	1689	8.7	A3	59 55.076	0.12	2	72.557	-14 17 20.42	0.23	2	72.557				7459
6747	-47	2749	9.2	K0	59 58.903	0.14	5	71.194	-48 01 38.14	0.15	4	71.467				837
6748	+13	1531	7.1	F5	7 00 01.768	0.16	4	71.942	+13 09 47.38	0.21	4	71.942				26264
6749	-69	686	8.3	K5	00 10.793	0.14	4	70.250	-69 44 16.00	0.07	4	70.250				19056
6750	-61	756	9.0	G5	00 14.310	0.11	4	70.600	-61 28 41.52	0.06	4	70.600				7460
6751	-40	2860	9.0	G5	00 17.899	0.14	4	70.602	-40 19 27.83	0.21	4	70.602				838
6752	-58	820	6.00	A5	00 18.509	0.09	5	69.885	-58 52 05.96	0.08	5	69.885	2546	9291		32546
6753	-45	2884	8.5	K5	7 00 23.787	0.13	4	70.537	-45 43 40.93	0.17	4	70.537				839
6754	-4	1788	4.89	B3	00 25.778	0.11	6	71.404	-4 09 54.78	0.11	6	71.404	2547	9293	1533	32547
6755	-54	1170	8.9	K2	00 31.699	0.12	4	70.537	-54 31 06.80	0.16	4	70.537				7461
6756	-67	688	9.5	K5	00 37.004	0.13	4	70.627	-67 28 16.52	0.26	4	70.627				19057
6757	-41	2744	9.0	G0	00 40.254	0.11	4	70.021	-41 32 14.07	0.27	4	70.021				840
6758	-18	1650	8.3	B9	7 00 47.186	0.04	2	71.570	-18 15 42.00	0.05	2	71.570				7462
6759	-2	1899	7.9	A3	00 55.023	0.07	2	72.051	-2 57 02.67	0.05	2	72.051		9305		7463
6760	-9	1816	8.4	K0	00 55.553	0.30	2	72.555	-9 29 07.80	0.31	2	72.555				7464
6761	-23	4797	3.12	B5p	00 56.131	0.05	29	71.380	-23 45 32.44	0.07	27	71.368	270	9307	1535	30270
6762	-24	4765	7.8	K0	00 57.049	0.09	4	70.946	-24 09 30.26	0.05	4	70.946				7465
6763	-4	1793	8.3	K0	7 00 57.769	0.04	2	73.049	-4 11 29.75	0.21	2	73.049		9308		7466
6764	+2	1530	7.6	G0	00 58.046	0.19	2	72.580	+2 30 43.84	0.28	2	72.580				7467
6765	-21	1718	8.3	K5	01 01.731	0.14	5	71.044	-21 21 55.65	0.14	5	71.044				7468
6766	+0	1778	8.8	K0	01 07.866	0.21	2	72.536	+0 10 14.07	0.32	2	72.536				7469
6767	+20	1687	3.7v	G0p	01 08.610	0.15	6	70.205	+20 38 43.57	0.10	5	69.829	269	9313	1536	30269
6768	-57	1111	8.03	G5	7 01 09.436	0.08	4	70.314	-57 31 41.94	0.17	4	70.314		9315		7470
6769	-55	1132	8.12	K0	01 11.158	0.14	4	70.985	-55 21 58.71	0.14	4	70.985		9316		7471
6770	-0	1572	9.0	A0	01 14.956	0.02	2	73.227	-0 10 28.99	0.19	2	73.227				7472
6771	-63	668	8.0	K0	01 20.273	0.20	5	71.034	-63 32 45.98	0.12	5	71.034				7473
6772	-71	515	8.2	F8	01 23.096	0.20	5	70.821	-71 19 24.03	0.14	5	70.821				19058
6773	-15	1625	4.07	B5	7 01 29.710	0.02	80	70.929	-15 33 29.11	0.04	76	70.903	271	9320	1538	80271
6774	+0	1783	8.6	G5	01 34.078	0.07	2	71.014	+0 06 10.58	0.04	2	71.014				7474
6775	-12	1761	8.4	K2	01 34.659	0.09	2	71.471	-13 01 18.44	0.15	2	71.471				7475
6776	-35	3310	8.1	K0	01 37.960	0.10	4	70.464	-35 14 40.50	0.05	4	70.464				7476
6777	-24	4785	7.01	B3	01 39.252	0.12	4	70.643	-25 00 31.43	0.16	4	70.643		9324		7477
6778	-28	3782	8.6	K0	7 01 40.672	0.04	4	71.231	-28 56 34.62	0.08	4	71.231				7478
6779	-1	1525	8.8	A0	01 42.917	0.06	2	72.513	-2 01 33.07	0.21	2	72.513				7479
6780	+4	1567	7.7	B9	01 43.738	0.06	2	71.586	+4 38 51.98	0.16	2	71.586				7480
6781	+16	1375	8.8	A0	01 44.502	0.13	4	70.225	+15 54 26.74	0.04	4	70.225				26268
6782	+1	1665	6.46	B9	01 44.719	0.01	2	70.984	+1 33 51.01	0.27	2	70.984		9328		7481
6783	-26	3797	8.6	K0	7 01 48.856	0.12	4	70.712	-26 34 01.03	0.10	4	70.712				7482
6784	-65	690	9.0	G5	01 55.431	0.12	4	70.653	-65 29 10.49	0.18	4	70.653				19059
6785	-39	3044	7.9	G5	01 55.460	0.11	4	70.139	-39 53 23.54	0.19	4	70.139				7483
6786	+3	1531	8.7	K5	01 59.312	0.08	2	73.018	+3 12 16.10	0.29	2	73.018				7484
6787	-45	2899	8.7	K5	02 01.558	0.20	4	70.660	-45 07 52.75	0.09	4	70.660				841
6788*	-10	1848	8.1	B0	7 02 03.618	0.01	2	70.953	-10 22 43.09	0.19	2	70.953				7485
6789	-34	3306	7.86	K0	02 06.041	0.10	4	70.813	-34 11 29.45	0.26	4	70.813		9331		7486
6790	-41	2771	7.3	K0	02 12.865	0.09	4	70.574	-41 07 52.68	0.18	4	70.574				842
6791	-70	590	8.2	G5	02 14.500	0.11	5	71.234	-70 29 31.44	0.11	5	71.234				19060
6792	-73	423	7.7	K2	02 15.546	0.13	4	70.561	-73 28 42.78	0.09	4	70.561				19061

6767 3.7m to 4.1m.
6776 SDS, 9.4m, 10°3, 259°.

6788 7.7m-9.0m, 0°6, 297°.

CATALOG OF 23,001 STARS FOR 1950.0

329

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
6793	+ 1	1673	8.9	K0	02 17.888	0.20	2	71.966	+ 1 38' 26.73	0.02	2	71.966				7487
6794	-37	3276	8.7	G5	02 23.014	0.13	5	71.255	-37 21 01.83	0.05	4	71.544				7488
6795	-11	1773	8.6	K0	02 24.645	0.06	2	72.010	-11 10 55.48	0.04	2	72.010				7489
6796*	- 1	1535	8.9	A2	02 26.754	0.09	4	71.353	- 1 42 28.10	0.11	4	71.353				26273
6797	-42	2929	5.26	A2	02 27.598	0.03	59	71.427	-42 15 43.31	0.04	57	71.418	1184	9342	1544	31184
6798	- 5	1956	8.9	A2	02 30.970	0.01	2	71.968	- 5 43 21.87	0.05	2	71.968				7490
6799	-50	2546	10.0	G5	02 33.662	0.05	4	70.118	-50 22 44.48	0.23	4	70.118				843
6800	-20	1706	7.1	K2	02 44.265	0.12	4	70.005	-20 45 13.08	0.14	4	70.005				7491
6801	-42	2936	8.9	K0	02 52.749	0.14	4	70.776	-42 42 08.98	0.07	4	70.776				844
6802	- 7	1731	8.0	K0	02 57.240	0.07	2	70.554	- 8 03 22.50	0.01	2	70.554				7492
6803	-31	4005	7.7	K5	03 05.808	0.10	4	69.514	-31 26 57.49	0.11	4	69.514				7493
6804	-33	3475	8.5	K0	03 06.907	0.05	3	71.000	-33 25 11.03	0.14	4	70.974				7494
6805	-43	2913	8.5	K5	03 07.046	0.13	5	70.980	-43 30 18.05	0.12	4	70.701				845
6806	-14	1710	8.1	K0	03 16.442	0.03	2	70.561	-14 47 41.40	0.13	2	70.561	9365	1548		7495
6807	- 0	1590	7.7	F8	03 20.081	0.31	2	70.486	- 0 56 29.89	0.21	2	70.486	9367			7496
6808	-16	1753	8.3	K0	03 21.082	0.02	3	71.069	-16 36 58.14	0.07	2	71.555				7497
6809	-56	1232	5.30	A0	03 22.415	0.03	57	70.974	-56 40 23.65	0.05	55	70.956	272	9368	1549	30272
6810	-23	4856	8.8	G5	03 25.548	0.10	4	69.999	-23 08 14.24	0.14	4	69.999				7498
6811	-30	3889	8.6	G5	03 26.107	0.04	4	69.285	-30 26 33.72	0.12	4	69.285				7499
6812	-38	3154	8.2	K2	03 50.460	0.15	4	70.001	-38 35 45.15	0.15	4	70.001				7500
6813	-60	761	9.0	M3	03 50.810	0.08	4	69.974	-60 23 25.55	0.03	4	69.974				7501
6814	- 4	1820	8.7	K0	04 03.424	0.03	2	70.578	- 4 51 23.62	0.32	2	70.578				7502
6815	-47	2795	8.2	K0	04 07.600	0.30	4	70.007	-47 37 31.77	0.14	4	70.007				846
6816	-52	1074	7.6	K5	04 11.811	0.07	4	69.630	-52 31 54.87	0.11	4	69.630				7503
6817	-36	3350	8.2	K0	04 14.291	0.03	4	69.991	-36 20 31.54	0.10	4	69.991				7504
6818	-21	1749	8.2	G5	04 26.811	0.10	4	68.766	-21 56 10.28	0.12	4	68.766				7505
6819	-59	766	8.7	K0	04 36.632	0.13	4	69.075	-59 18 48.61	0.14	4	69.075				7506
6820	-68	587	8.2	K2	04 41.991	0.08	5	70.849	-68 10 16.31	0.08	5	70.849				19062
6821	-74	427	9.2	K0	04 46.506	0.12	4	70.268	-74 24 38.61	0.14	4	70.268				19063
6822	-18	1687	8.6	K2	04 48.375	0.12	2	70.487	-18 51 51.89	0.12	2	70.487				7507
6823	-12	1792	8.5	K2	04 50.562	0.07	2	71.464	-12 17 00.51	0.03	2	71.464				7508
6824	- 1	1557	8.6	K0	04 51.088	0.15	2	70.640	- 1 27 27.26	0.16	2	70.640				7509
6825	-26	3880	6.38	B3	04 58.357	0.09	4	69.598	-26 34 39.86	0.02	4	69.598				7510
6826	-86	105	6.41	F2	04 58.776	0.02	203	71.054	-86 57 27.45	0.03	194	71.039	1661	9407	1558	61661
6826 SP					04 58.772	0.03	142	70.998	-86 57 27.27	0.05	139	70.988	1661	9407	1558	71661
6827	- 9	1854	6.90	A2	04 59.180	0.24	2	70.584	- 9 54 21.38	0.02	2	70.584				7511
6828	-25	4051	7.5	K5	04 59.981	0.09	4	69.794	-25 42 06.42	0.15	4	69.794				7512
6829	-49	2612	8.8	K2	05 03.627	0.07	4	69.930	-49 43 03.19	0.12	4	69.930				847
6830	+ 7	1607	5.92	K0	05 07.300	0.02	97	71.767	+ 7 33 03.77	0.04	93	71.752	1185	9409	1559	31185
6831	-20	1727	8.4	K2	05 07.565	0.08	4	70.988	-20 12 21.00	0.13	4	70.988				7513
6832	-29	3912	7.5	M1	05 12.055	0.03	4	70.613	-29 27 37.41	0.12	4	70.613				7514
6833	-44	3134	8.3	F0	05 14.913	0.09	4	69.971	-44 43 12.42	0.16	4	69.971				848
6834	- 3	1750	8.3	M0	05 16.981	0.13	3	71.010	- 3 17 28.86	-	1	72.077				7515
6835	+ 4	1595	8.7	K0	05 21.688	0.30	2	71.648	+ 4 18 07.07	0.51	2	71.648				7516
6836	-53	1246	8.6	K0	05 25.544	0.14	4	69.070	-53 49 11.27	0.30	4	69.070				7517
6837	-51	2300	8.6	K0	05 32.018	0.23	4	69.103	-51 13 27.22	0.11	4	69.103				849
6838	-40	2932	8.11	K2	05 32.422	0.12	4	69.551	-40 27 29.70	0.25	4	69.551	9422			850
6839*	-15	1657	7.2	G0	05 36.667	0.12	2	71.465	-15 37 14.07	0.10	2	71.465				7518
6840	-63	683	8.9	A0	05 41.011	0.10	4	68.565	-64 00 13.17	0.14	4	68.565				19064
6841	-32	3687	8.4	K0	05 51.489	0.16	5	70.375	-32 18 48.24	0.08	4	70.445				7519
6842	-10	1885	8.5	G5	05 54.317	0.24	2	70.614	-10 32 36.83	0.06	2	70.614				7520
6843	-27	3657	8.5	K0	05 56.727	0.13	4	69.229	-27 40 18.85	0.11	4	69.229				7521
6844	-75	422	8.2	M1	05 56.883	0.06	4	69.986	-75 09 11.75	0.12	4	69.986				19065
6844 SP					05 56.861	0.42	4	70.602	-75 09 11.29	0.70	4	70.602				19065
6845	-77	293	8.2	G0	05 57.724	0.15	4	69.451	-77 51 56.62	0.16	4	69.451				19066
6845 SP					05 57.686	0.06	4	69.957	-77 51 56.41	0.24	4	69.957				19066
6846	+ 4	1599	7.7	M0	05 58.421	0.10	2	71.527	+ 4 15 24.59	0.16	2	71.527				7522
6847	+ 0	1816	8.5	A0	06 00.989	0.19	2	71.610	+ 0 32 25.68	0.24	2	71.610				7523
6848	-34	3358	9.0	K0	06 01.478	0.12	4	69.556	-34 51 49.14	0.18	4	69.556				7524
6849	- 2	1945	8.8	A2	06 20.242	0.14	3	72.423	- 2 37 21.96	0.12	3	72.423				7525
6850	-78	245	8.5	K2	06 21.155	0.10	4	69.490	-78 42 17.50	0.08	4	69.490				19067
6850 SP					06 20.968	0.21	5	70.611	-78 42 17.09	0.29	4	70.894	273	9443	1568	19067
6851	-26	3916	1.98	F8p	06 21.428	0.03	46	71.288	-26 18 45.24	0.05	45	71.248				30273
6852	-39	3093	8.8	K0	06 24.667	0.16	4	70.207	-39 12 22.96	0.14	4	70.207				7526
6853	- 8	1761	8.2	*	06 24.907	0.27	2	72.024	- 8 35 44.94	0.08	2	72.024	9446			7527
6854	+ 2	1576	7.7	K0	06 31.503	0.03	2	70.574	+ 2 20 04.31	0.04	2	70.574				7528
6855	-48	2733	8.6	G5	06 35.213	0.14	4	70.020	-48 50 11.82	0.23	4	70.020				851
6856	-19	1708	8.4	K2	06 38.669	0.01	2	70.976	-19 50 32.26	0.00	2	70.976				7529
6857	-66	655	7.09	K0	06 44.293	0.02	4	69.902	-66 56 09.71	0.09	4	69.902				19068
6858	-36	3376	9.3	F0	06 48.680	0.03	4	70.050	-36 08 11.15	0.24	4	70.050	9453			7530
6859	- 6	1948	8.8	K0	06 49.016	0.06	3	71.963	- 6 59 20.37	0.01	2	71.897				7531
6860	-38	3202	8.9	K5	06 56.312	0.21	4	69.984	-38 33 36.49	0.11	4	69.984				7532
6861	-56	1256	8.7	G5	06 59.223	0.13	4	69.241	-56 35 00.96	0.11	4	69.241				7533
6862	-14	1735	8.4	K7	07 06.629	0.13	4	70.776	-14 56 41.85	0.06	2	71.468				7534
6863	-39	3105	4.85	B3	07 10.230	0.11	7	70.470	-39 34 27.59	0.17	6	70.200	2551	9463	1570	32551

6796 A 5764AB, 9.0m-11.0m, 0°7', 19°.
 6839 A 5814, 7.6m-8.6m, 0°2', 288°.

6853 K+A0.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
6864	-54	1198	8.2	K5	7 07 20.377	0.07	4	69.696	-54 24 06.49	0.08	4	69.696				7535
6865	-5	1997	8.2	B9	07 25.745	0.17	2	70.501	-5 39 13.17	0.13	2	70.501				7536
6866	-24	4931	8.3	K5	07 29.301	0.11	4	68.785	-24 13 33.64	0.22	4	68.785				7537
6867	-28	3926	8.6	K0	07 33.376	0.10	4	69.508	-28 54 33.52	0.23	4	69.508				7538
6868	-22	1729	8.5	G5	07 37.045	0.07	4	68.930	-22 55 37.87	0.14	4	68.930				7539
6869	-17	1809	8.4	K2	7 07 37.571	0.01	2	70.503	-17 36 48.96	0.05	2	70.503				7540
6870	-13	1851	7.26	K0	07 38.679	0.08	2	71.517	-13 32 01.40	0.16	2	71.517		9472		7541
6871*	+6	1547	8.6	B8	07 43.345	0.11	5	72.243	+6 23 10.94	0.23	5	72.243				26285
6872	-4	1840	5.02	K0	07 44.629	0.03	58	72.037	-4 09 22.51	0.04	57	72.033	1186	9477	1572	31186
6873	+0	1832	9.0	F5	07 49.057	0.16	2	70.714	+0 20 41.55	0.10	2	70.714				7542
6874	-33	3546	8.8	K0	7 07 50.035	0.12	4	69.458	-33 15 24.87	0.24	4	69.458				7543
6875	+1	1719	8.7	G0	07 50.641	0.10	2	70.589	+1 43 34.41	0.14	2	70.589		9480		7544
6876	-3	1773	9.1	B9	07 54.890	0.10	4	71.264	-3 00 47.61	0.07	3	71.276				26286
6877	-18	1711	6.18	F0	07 57.143	0.01	2	71.502	-18 36 10.60	0.12	2	71.502		9483		7545
6878	+27	1327	5.60	A2	08 17.035	0.07	6	70.976	+26 56 24.90	0.17	5	70.753	2553	9493	1576	32553
6879	-15	1684	8.6	K0	7 08 17.214	0.08	2	71.558	-16 03 15.94	0.00	2	71.558				7546
6880	-3	1780	8.8	F5	08 28.405	0.21	2	71.584	-3 47 42.83	0.24	2	71.584				7547
6881	-63	692	8.1	K0	08 37.383	0.14	4	69.514	-63 40 43.99	0.08	3	69.066				7548
6882	-50	2612	8.5	K0	08 38.323	0.09	4	70.091	-50 20 40.37	0.21	4	70.091				852
6883	-60	780	9.1	K0	08 38.971	0.16	4	70.477	-60 27 10.75	0.12	4	70.477				7549
6884	-37	3364	7.72	K0	7 08 41.145	0.14	4	69.510	-37 07 57.84	0.11	4	69.510		9503		7550
6885	-55	1171	8.6	K0	08 44.736	0.13	4	70.584	-55 38 34.73	0.16	4	70.584				7551
6886	-7	1790	8.6	K0	08 45.914	0.14	2	72.002	-7 37 14.61	0.01	2	72.002				7552
6887	-31	4140	7.8	K2	08 48.960	0.12	4	69.941	-31 18 53.29	0.15	4	69.941				7553
6888*	-56	1265	8.35	F0	08 51.109	0.14	4	70.707	-56 17 18.70	0.44	4	70.707		9506		7554
6889	-10	1906	8.0	B8	7 08 53.235	0.18	6	71.311	-10 27 28.03	0.11	5	71.154				26290
6890	-0	1635	8.5	K0	08 57.782	0.04	3	71.330	-0 56 51.30	0.25	2	71.947				7555
6891	-81	214	8.8	A0	09 10.652	0.14	4	69.490	-81 25 11.00	0.16	4	69.490				19069
6891 SP					09 10.649	0.11	4	70.713	-81 25 11.15	0.29	3	69.810				19069
6892	-70	600	3.87	K0	09 10.823	0.04	81	71.210	-70 25 02.31	0.04	79	71.175	1189	9514	1578	31189
6893	-21	1791	6.73	B8	7 09 12.640	0.08	4	69.510	-21 43 09.38	0.10	4	69.510		9517		7556
6894	-35	3391	9.1	K0	09 15.133	0.09	4	70.016	-35 20 38.09	0.07	4	70.016				7557
6895	-0	1636	4.09	A0	09 18.620	0.05	22	71.597	-0 24 30.40	0.05	22	71.597	1187	9518	1579	31187
6896	-59	787	8.8	K0	09 19.326	0.05	5	70.880	-59 17 43.84	0.21	4	70.565				7558
6897	-44	3199	8.5	K0	09 20.528	0.13	4	69.557	-44 36 13.73	0.13	4	69.557				853
6898	-58	860	8.3	G5	7 09 21.977	0.09	4	70.047	-58 54 27.35	0.03	4	70.047				7559
6899	+18	1524	8.5	G5	09 24.774	0.04	4	72.728	+18 44 18.84	0.16	4	72.728				26292
6900	-75	426	7.62	K2	09 25.228	0.09	4	69.550	-75 58 01.11	0.17	4	69.550		9522		19070
6900 SP					09 25.169	0.22	4	69.525	-75 58 00.54	0.53	4	69.525		9522		19070
6901	-48	2765	5.11	K2	09 26.812	0.11	7	71.311	-48 50 59.49	0.14	6	71.175	2554	9523		32554
6902	-25	4174	8.6	A0	7 09 31.432	0.27	3	69.619	-25 41 10.31	0.10	3	69.619				7560
6903	-20	1767	5.71	A0	09 32.110	0.03	6	72.055	-20 47 55.63	0.13	6	72.055	2556	9528		32556
6904	-32	3742	8.7	K5	09 33.909	0.10	4	70.018	-32 43 06.25	0.08	4	70.018				7561
6905	-41	2870	9.1	K5	09 42.444	0.16	4	70.022	-41 37 58.03	0.15	4	70.022				854
6906	-5	2014	8.1	K2	09 42.467	0.16	2	71.539	-5 21 36.49	0.02	2	71.539		9531		7562
6907	-2	1980	8.1	K2	7 09 53.266	0.34	2	71.742	-2 29 22.08	--	1	71.236			1585	7563
6908	-47	2858	9.4	K0	10 02.901	0.11	4	70.518	-47 57 03.53	0.06	4	70.518				855
6909	-27	3749	6.68	B3	10 04.506	0.11	4	70.050	-27 15 00.20	0.12	4	70.050		9542		7564
6910	-25	4191	5.86	B3	10 09.361	0.14	4	70.734	-25 51 27.37	0.07	4	70.734		9545		7565
6911	-30	4086	8.5	G5	10 13.444	0.10	4	70.805	-30 11 48.37	0.19	4	70.805				7566
6912	-14	1768	8.3	F8	7 10 15.196	0.07	2	72.912	-14 24 23.47	0.27	2	72.912				7567
6913	+17	1525	9.0	A2	10 17.979	0.11	5	71.280	+17 01 28.05	0.10	4	71.293				26295
6914	+3	1597	8.4	F0	10 19.737	0.03	2	72.036	+3 00 14.90	--	1	71.834				7568
6915	-11	1847	8.0	K0	10 29.448	0.04	2	72.058	-11 30 52.80	0.30	2	72.058				7569
6916	+16	1417	5.3v	M3	10 30.050	0.03	96	71.209	+16 14 42.75	0.03	94	71.212	1188	9551	1586	81188
6917	-66	659	9.2	G0	7 10 45.788	0.11	4	70.531	-66 14 22.77	0.05	4	70.531				19071
6918	-11	1849	6.01	K0	10 46.038	0.05	6	70.337	-11 09 55.68	0.09	6	70.337	2557	9558		32557
6919	-12	1847	8.9	K5	10 46.916	0.31	2	72.037	-13 02 24.26	0.08	2	72.037				7570
6920	-16	1832	8.8	B9	10 50.388	0.15	2	72.043	-16 33 51.74	0.40	2	72.043				7571
6921	-41	2883	9.0	G5	10 50.887	0.15	5	70.887	-42 02 05.03	0.09	4	71.084				856
6922	+18	1528	8.3	G5	7 10 51.618	0.11	4	73.173	+18 01 10.52	0.10	3	73.164				26299
6923	-53	1276	9.2	K0	10 56.953	0.07	4	70.055	-53 07 51.55	0.09	4	70.055				7572
6924	-20	1782	8.7	B3	10 59.942	0.18	4	68.988	-20 29 42.76	0.02	4	68.988				7573
6925	-49	2685	7.8	K2	11 05.341	0.12	4	70.574	-49 14 29.25	0.17	4	70.574				857
6926	-46	2977	4.47	F0	11 07.754	0.04	61	71.012	-46 40 27.66	0.04	58	70.921	275	9569	1589	30275
6927	-21	1816	8.7	K0	7 11 14.196	0.12	4	70.294	-21 37 26.79	0.08	4	70.294				7574
6928*	-0	1652	9.0	A0	11 20.739	0.26	4	71.835	-1 06 48.34	0.36	4	71.835				26300
6929	-34	3427	8.6	K5	11 22.296	0.19	4	70.627	-34 43 49.50	0.08	4	70.627				7575
6930	-43	3029	8.9	K0	11 23.837	0.14	4	71.260	-43 34 21.09	0.07	4	71.260				858
6931	+4	1627	7.60	G5	11 24.400	0.16	2	72.047	+4 39 54.08	0.16	2	72.047			1593	7576
6932	-39	3161	9.0	K5	7 11 26.022	0.07	4	71.277	-39 25 40.28	0.10	4	71.277				7577
6933	-52	1113	8.9	K2	11 31.080	0.18	5	70.686	-52 35 41.68	0.11	4	70.326				7578
6934	-45	3016	9.1	G5	11 34.666	0.09	4	71.457	-45 50 38.72	0.17	4	71.457				859
6935	-28	4031	8.3	K2	11 43.501	0.10	4	70.704	-28 31 19.75	0.06	4	70.704				7579
6936	+12	1469	5.84	K0	11 45.307	0.07	6	69.897	+12 12 11.84	0.10	6	69.897	2559	9592	1598	32559

6871 A 5842AB, 9.0m-11.2m, 0°6, 354°.
6888 SDS, 8.7m-9.9m, 1°5, 219°.

6916 5.3m to 5.6m.
6928 A 5905AB, 9.4m-9.6m, 0°2, 98°.

CATALOG OF 23,001 STARS FOR 1950.0

331

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
6937	-9	1916	8.5	K5	7 11 46.299	0.00	2	70.656	-9 10' 11.17	0.21	2	70.656				7580
6938	-62	790	8.7	G5	11 50.707	0.11	4	70.306	-62 59 58.94	0.14	4	70.306				7581
6939	-61	784	7.70	K5	11 51.403	0.12	4	70.140	-61 17 42.95	0.18	4	70.140		9597		7582
6940	-32	3792	8.9	K0	11 53.728	0.02	4	70.047	-32 08 48.48	0.23	4	70.047				7583
6941	-18	1740	8.2	F2	11 58.262	0.09	3	72.384	-18 53 48.07	0.39	3	72.384				7584
6942	-35	3426	8.3	K5	7 11 59.127	0.06	4	70.057	-35 13 55.65	0.07	4	70.057				7585
6943	+3	1613	9.0	B9	12 01.439	0.24	2	70.563	+2 59 21.96	0.27	2	70.563				7586
6944	-64	682	8.7	K0	12 09.070	0.13	4	70.755	-64 34 36.90	0.17	4	70.755				19072
6945	-48	2798	8.9	K5	12 09.227	0.13	4	70.571	-48 10 51.70	0.20	4	70.571				860
6946	-72	577	8.11	K0	12 10.302	0.05	4	70.108	-72 40 10.57	0.09	4	70.108		9607		19073
6947	-29	4094	8.5	A0	7 12 11.312	0.08	4	70.769	-29 50 31.34	0.15	4	70.769				7587
6948*	+9	1581	8.4	A5	12 20.658	0.03	3	72.520	+8 56 30.19	0.24	3	72.520				26304
6949	-19	1767	7.29	B3	12 21.493	0.16	2	72.468	-19 54 12.41	0.19	2	72.468		9611		7588
6950	-24	5059	8.3	K2	12 22.416	0.08	4	69.535	-24 47 02.07	0.17	4	69.535				7589
6951	-22	1764	8.2	G5	12 24.081	0.07	4	70.058	-22 51 16.78	0.06	4	70.058				7590
6952	-1	1613	9.0	K2	7 12 26.036	0.12	2	70.654	-2 00 05.53	0.01	2	70.654				7591
6953	-51	2371	9.1	K0	12 28.365	0.13	4	69.483	-51 44 18.66	0.13	4	69.483				861
6954	-2	2008	8.0	A2	12 29.962	0.11	3	71.759	-2 44 07.55	0.23	2	71.590				7592
6955	-33	3616	8.6	K0	12 34.964	0.14	4	70.485	-33 28 58.32	0.06	4	70.485				7593
6956	-79	243	7.86	A0	12 36.557	0.03	4	69.550	-79 20 49.54	0.24	4	69.550		9618		19074
6956 SP					7 12 36.594	0.21	4	70.478	-79 20 49.80	0.41	4	70.478		9618		19074
6957*	+1	1746	8.8	F8	12 37.520	0.08	4	70.005	+1 06 03.67	0.11	4	70.005				26305
6958	-88	68	7.75	A0	12 45.530	0.04	79	71.341	-88 41 00.54	0.05	73	71.304	1662	9624	1608	31662
6958 SP					12 45.541	0.05	36	70.966	-88 41 00.67	0.09	35	70.981	1662	9624	1608	51662
6959	+0	1871	6.52	G5	12 45.814	0.20	2	70.473	-0 04 23.00	0.23	2	70.473		9622	1607	7594
6960	+2	1615	8.8	K5	7 12 46.642	0.38	2	70.461	+2 09 47.49	--	1	70.066				7595
6961	-40	3010	9.1	K2	12 50.586	0.12	4	70.044	-40 50 40.93	0.07	4	70.044				862
6962	-37	3408	9.1	F5	12 52.284	0.17	4	70.042	-37 14 42.58	0.16	4	70.042				7596
6963	+1	1749	8.6	F5	12 54.743	0.08	2	70.554	+0 52 54.02	0.20	2	70.554				7597
6964	-10	1943	8.6	K0	13 04.713	0.24	2	70.487	-10 48 04.82	0.09	2	70.487				7598
6965	-6	2016	8.4	K5	7 13 06.475	0.02	2	71.484	-6 59 56.18	0.24	2	71.484				7599
6966	-46	2999	8.5	G5	13 10.862	0.08	5	70.024	-47 02 48.84	0.08	4	70.005				863
6967	-28	4067	8.0	K0	13 19.459	0.12	5	69.663	-28 16 33.47	0.13	5	69.663				7600
6968	-38	3271	9.1	K2	13 20.436	0.17	4	69.522	-38 29 32.76	0.08	4	69.522				7601
6969	-31	4244	8.6	K	13 25.447	0.13	4	69.974	-31 50 59.34	0.17	4	69.974				7602
6970	-27	3832	7.84	M0	7 13 33.775	0.11	4	69.718	-27 20 01.70	0.04	4	69.718		9641		7603
6971	+12	1477	8.7	A3	13 35.821	0.07	4	71.545	+12 32 28.47	0.14	4	71.545				26306
6972	-15	1732	6.79	B3	13 40.924	0.11	3	71.019	-16 08 46.04	0.44	2	71.480		9643		7604
6973	-36	3469	7.68	K5	13 41.780	0.06	4	69.537	-36 28 18.88	0.13	4	69.537		9645		7605
6974	-60	803	7.12	F2	13 43.678	0.11	6	69.267	-60 58 53.56	0.11	6	69.267	2560	9647		32560
6975	-13	1906	8.4	K0	7 13 48.164	0.13	2	70.512	-14 01 32.31	0.13	2	70.512				7606
6976	-16	1857	8.8	B9	13 52.916	0.09	2	71.543	-16 39 37.36	0.10	2	71.543				7607
6977	-15	1734	5.39	A2	13 58.515	0.14	6	69.517	-15 29 45.57	0.20	6	69.517	2561	9657		32561
6978	+2	1623	7.6	G0	14 00.443	0.02	2	70.484	+1 58 10.32	0.03	2	70.484		9659		7608
6979	-21	1844	8.6	K2	14 07.668	0.11	4	69.792	-21 19 52.33	0.17	4	69.792				7609
6980	-29	4144	8.1	K5	7 14 11.394	0.11	4	70.243	-30 02 34.61	0.06	4	70.243				7610
6981	-11	1867	8.3	K0	14 16.686	0.10	3	71.746	-11 23 50.29	0.07	3	71.746				7611
6982	+4	1648	8.6	F2	14 17.099	0.17	2	71.569	+4 41 59.22	0.04	2	71.569				7612
6983	-9	1953	8.3	K5	14 30.145	0.06	2	71.581	-9 38 27.06	0.03	2	71.581				7613
6984	-29	4156	8.5	K5	14 32.701	0.05	4	69.982	-29 50 51.23	0.15	4	69.982				7614
6985	-27	3852	4.77	M3	7 14 34.659	0.08	6	69.203	-27 47 28.95	0.05	6	69.203	2562	9678		32562
6986	-4	1885	8.5	G5	14 37.290	0.05	2	70.576	-4 17 25.76	0.16	2	70.576				7615
6987	-51	2398	9.4	K0	14 38.797	0.12	4	68.731	-52 02 04.20	0.15	4	68.731				864
6988	+13	1623	8.7	F8	14 43.098	0.10	4	71.326	+13 29 09.61	0.17	4	71.326				26309
6989	+0	1883	8.5	G5	14 46.704	0.24	2	70.648	+0 44 21.52	0.15	2	70.648				7616
6990	-12	1883	8.4	K	7 14 47.417	0.28	2	71.600	-12 45 20.35	0.01	2	71.600				7617
6991	-19	1793	8.6	K0	14 50.066	0.12	2	71.667	-19 47 19.21	0.19	2	71.667				7618
6992	-58	887	7.30	K5	14 50.121	0.09	4	69.486	-58 42 56.95	0.07	4	69.486		9687		7619
6993	-20	1830	7.2	K0	14 55.113	0.09	4	69.499	-21 05 52.30	0.07	4	69.499				7620
6994	-54	1231	7.52	K0	14 56.110	0.14	4	69.549	-54 52 18.48	0.12	4	69.549		9691		7621
6995	-18	1766	8.8	K2	7 15 07.707	0.34	2	70.456	-18 10 22.06	0.41	2	70.456				7622
6996	-32	3847	7.8	B9	15 07.942	0.15	4	69.565	-32 57 19.89	0.13	4	69.565				7623
6997	-62	806	8.6	K	15 09.568	0.05	4	69.657	-63 05 24.08	0.17	4	69.657				7624
6998	+16	1443	3.65	A2	15 13.130	0.08	4	72.223	+16 37 55.34	0.13	4	72.223	277	9701	1618	30277
6999	-36	3489	2.74	K5	15 22.518	0.03	88	71.425	-37 00 23.85	0.04	81	71.411	278	9706	1620	30278
7000	-57	1179	9.1	K0	7 15 26.637	0.10	4	70.574	-57 33 00.42	0.18	4	70.574				7625
7001	-2	2039	8.0	A0	15 32.704	0.08	2	70.472	-3 01 22.91	0.07	2	70.472				7626
7002	-26	4139	8.6	K0	15 38.794	0.11	4	69.734	-26 35 00.37	0.10	4	69.734				7627
7003	-50	2668	9.1	K0	15 39.015	0.18	4	70.138	-50 12 41.22	0.24	4	70.138				865
7004	-53	1306	8.6	M0	15 41.027	0.08	4	70.565	-53 53 22.16	0.16	3	70.469				7628
7005	-25	4322	8.1	F0	7 15 43.988	0.13	4	70.426	-25 53 39.91	0.10	4	70.426				7629
7006	+4	1654	8.4	A0	15 52.653	0.15	4	71.335	+4 08 33.10	0.00	2	71.558				7630
7007	-56	1297	8.4	K0	15 56.321	0.06	4	71.054	-56 20 11.86	0.15	4	71.054				7631
7008	-35	3492	8.9	K5	15 59.361	0.06	5	70.457	-36 03 04.87	0.19	5	70.457				7632
7009	-33	3674	8.8	K5	16 00.220	0.17	4	71.005	-33 21 09.98	0.11	4	71.005				7633

6948 A 5923AB, 8.4m-12.8m, 0°9, 18°.

6957 A 5929AB, 9.0m-10.2m, 0°6, 60°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
7010*	-40	3048	9.2	G5	7 16 02.660	0.09	4	70.151	-40 09 42.51	0.05	4	70.151				866
7011	+3	1638	8.5	G0	16 13.877	0.11	3	71.828	+2 57 02.82	0.14	3	71.828		9726		7634
7012	-23	5250	8.4	K0	16 20.752	0.17	4	69.305	-23 27 54.64	0.14	4	69.305				7635
7013	-7	1879	8.4	K0	16 29.627	0.10	2	71.582	-7 53 49.35	0.21	2	71.582				7636
7014	-39	3226	7.9	K0	16 32.151	0.07	4	70.520	-39 59 28.97	0.09	4	70.520				7637
7015	-1	1653	8.4	A0	7 16 38.221	0.02	2	70.648	-1 33 46.62	0.28	2	70.648				7638
7016	+2	1640	6.06	G5	16 45.571	0.05	8	71.180	+2 50 01.58	0.08	6	70.870	2564	9739	1626	32564
7017	-0	1677	7.78	G0	16 45.642	0.31	2	70.528	-0 14 27.47	0.20	2	70.528			1627	7639
7018	-36	3517	9.0	K0	16 46.660	0.12	4	70.810	-36 48 03.85	0.04	4	70.810				7640
7019	-48	2853	8.5	K5	16 50.006	0.06	4	70.567	-48 58 51.72	0.19	4	70.567				867
7020	-41	2961	8.03	K0	7 16 51.378	0.07	4	70.578	-41 51 57.65	0.13	4	70.578		9745		868
7021	-67	730	4.02	F5	16 51.599	0.03	83	71.029	-67 51 56.28	0.04	81	71.001	281	9747	1629	30281
7022	-38	3308	9.0	K2	16 52.472	0.17	4	71.106	-38 24 45.81	0.16	4	71.106				7641
7023	-42	3123	8.6	G5	16 58.657	0.10	5	71.083	-42 22 18.03	0.25	5	71.083				869
7024	-61	797	8.8	K5	17 00.936	0.05	4	70.782	-61 19 49.84	0.14	4	70.782				7642
7025	-17	1917	6.60	B8	7 17 04.510	0.27	2	70.502	-17 25 54.36	0.03	2	70.502		9751		7643
7026	-84	128	8.7	A2	17 04.923	0.08	4	69.238	-84 56 25.10	0.04	4	69.238				19075
7026 SP					17 04.777	0.17	3	70.368	-84 56 24.87	0.43	3	70.368				19075
7027	+7	1684	5.95	F8	17 05.847	0.11	7	70.948	+7 14 12.33	0.09	6	70.902	2565	9752		32565
7028f	+22	1645	3.52	F0	17 08.228	0.03	76	71.546	+22 04 33.75	0.04	72	71.522	279	9755	1632	80279
7029	-24	5188	7.30	B3	7 17 08.285	0.17	3	70.109	-24 51 45.56	0.12	3	70.109		9754		7644
7030	-49	2749	9.3	K0	17 08.671	0.32	4	70.813	-49 15 53.46	0.11	4	70.813				870
7031	-33	3696	6.43	K0	17 21.932	0.09	6	69.848	-33 38 01.74	0.07	6	69.848	2566	9761	1634	32566
7032	-37	3466	6.96	K0	17 24.042	0.08	6	71.164	-37 56 42.09	0.15	5	71.377		9762		7645
7033	-46	3059	8.6	K0	17 24.344	0.09	4	70.065	-46 23 13.66	0.11	4	70.065				871
7034	-14	1834	8.3	B8	7 17 29.030	0.14	2	71.602	-15 10 00.83	0.14	2	71.602				7646
7035	-4	1908	7.3	A5	17 36.476	0.02	2	71.640	-4 53 51.31	0.02	2	71.640				7647
7036	-44	3314	9.2	K0	17 41.045	0.06	4	71.272	-44 20 31.32	0.17	4	71.272				872
7037	-5	2073	7.7	K0	17 46.135	0.04	2	71.577	-5 02 38.52	0.05	2	71.577				7648
7038	-13	1951	8.6	K5	17 51.559	0.01	2	70.596	-13 54 13.26	0.05	2	70.596				7649
7039	-30	4312	8.3	F8	7 17 58.399	0.06	4	69.783	-30 31 51.00	0.06	4	69.783				7650
7040*	-1	1663	8.1	B9	18 03.549	0.05	4	71.025	-1 30 05.73	0.09	4	71.025				26319
7041	-6	2057	8.0	G5	18 03.771	0.21	3	71.094	-6 30 31.51	0.28	2	71.593				7651
7042	-34	3530	9.0	G5	18 07.399	0.20	4	70.279	-34 58 43.46	0.08	4	70.279				7652
7043	-10	1996	8.9	A2	18 08.386	0.15	2	70.486	-11 08 54.21	0.24	2	70.486				7653
7044	-71	559	9.0	K0	7 18 08.826	0.04	4	69.028	-71 14 30.41	0.14	4	69.028				19076
7045	-43	3114	8.9	K0	18 12.573	0.02	4	70.069	-43 43 59.47	0.12	4	70.069				873
7046	-0	1683	8.0	A5	18 13.465	0.05	2	71.599	-0 45 07.99	0.00	2	71.599				7654
7047	-21	1884	8.5	G5	18 14.539	0.09	4	69.793	-21 59 24.72	0.18	4	69.793				7655
7048	-4	1915	9.3v	K0	18 20.433	0.12	5	70.611	-5 09 54.48	0.18	4	70.232				26320
7049	-55	1214	7.21	K2	7 18 21.091	0.07	4	69.075	-55 52 37.96	0.09	4	69.075		9785		7656
7050	-45	3100	8.6	K0	18 25.490	0.15	4	70.456	-45 15 26.99	0.18	4	70.456				874
7051	-31	4375	8.6	G5	18 29.680	0.07	4	69.719	-31 33 36.73	0.07	4	69.719				7657
7052	-18	1794	8.2	K p	18 31.064	0.04	2	71.569	-19 07 59.31	0.12	2	71.569				7658
7053	-87	113	8.5	F2	18 34.365	0.25	4	69.755	-87 13 20.51	0.25	4	69.755				19077
7053 SP					7 18 34.261	0.07	4	70.038	-87 13 20.13	0.19	4	70.038				19077
7054	-2	2066	9.0	K5	18 36.382	0.19	2	71.653	-2 18 06.95	0.12	2	71.653				7659
7055	-8	1858	8.0	K0	18 38.318	0.03	3	71.347	-9 02 13.30	0.25	3	71.347				7660
7056	-64	704	9.3	K0	18 43.980	0.24	4	69.753	-65 07 54.40	0.11	4	69.753				19078
7057	-69	715	8.1	K0	18 49.655	0.18	4	69.518	-69 13 59.46	0.09	3	69.072				19079
7058	-3	1858	8.0	K5	7 18 52.308	0.10	2	70.524	-3 11 35.33	0.21	2	70.524				7661
7059	-26	4223	5.84	B3	18 53.062	0.04	6	69.933	-26 52 07.60	0.09	6	69.933		9805	1641	21007
7060	-75	439	9.1	K2	19 00.169	0.11	4	69.960	-75 35 14.88	0.10	4	69.960				19080
7060 SP					19 00.091	0.17	4	70.574	-75 35 15.38	0.21	4	70.574				19080
7061	+3	1656	8.8	A0	19 02.114	0.15	3	71.735	+3 27 47.37	0.03	2	71.555				7662
7062	-47	2990	8.9	K7	7 19 02.674	0.11	4	69.984	-47 11 09.54	0.11	4	69.984				875
7063	-18	1798	8.7	K0	19 06.685	0.20	2	71.999	-18 31 27.47	0.41	2	71.999				7663
7064	-5	2080	6.59	B3	19 07.327	0.13	6	68.580	-5 48 05.84	0.10	6	68.580	2569	9810		32569
7065	-59	816	9.0	G5	19 07.544	0.09	4	70.042	-59 12 01.18	0.19	4	70.042				7664
7066	-28	4209	8.5	K0	19 08.163	0.16	4	69.466	-28 31 55.67	0.13	4	69.466				7665
7067	-66	680	8.20	M0	7 19 09.970	0.18	4	70.043	-67 05 37.35	0.15	4	70.043		9813		19081
7068	+1	1781	9.0	A2	19 19.021	0.34	2	70.603	+1 38 33.26	0.06	2	70.603				7666
7069	-35	3538	8.0	A0	19 26.052	0.09	4	69.967	-35 24 01.90	0.14	4	69.967				7667
7070	-40	3094	7.8	K0	19 26.210	0.12	5	70.029	-41 06 07.17	0.08	4	70.012				876
7071	-71	562	8.8	K0	19 29.129	0.11	4	70.524	-72 05 34.09	0.09	4	70.524				19082
7072	-29	4271	8.7	F0	7 19 36.400	0.11	4	70.031	-29 56 29.50	0.11	4	70.031				7668
7073	-57	1198	9.1	G5	19 39.611	0.07	4	70.029	-57 23 36.81	0.14	4	70.029				7669
7074	-50	2707	8.6	K5	19 42.472	0.10	5	70.469	-50 42 08.83	0.10	5	70.469				877
7075	+0	1916	6.64	G5	19 53.687	0.14	3	71.414	+0 47 51.85	0.06	3	71.414		9831		7670
7076	-35	3545	8.0	K0	19 54.492	0.17	4	69.546	-35 20 27.69	0.20	4	69.546				7671
7077	+0	1918	6.68	B9	7 19 57.375	0.12	3	71.012	-0 09 45.79	0.42	2	71.471		9832		7672
7078	-18	1806	4.87	B8	20 01.320	0.09	6	68.737	-18 55 12.29	0.09	6	68.737	2570	9836		32570
7079	-38	3344	7.60	F8	20 13.557	0.22	4	69.564	-38 50 26.16	0.23	4	69.564		9840		7673
7080	-24	5279	7.40	K2	20 18.852	0.14	4	69.005	-24 48 25.71	0.11	4	69.005			1646	7674
7081*	-73	441	8.6	G5	20 22.891	0.21	4	69.999	-73 49 28.49	0.10	4	69.999				19083

7010 9.2m-11.5m, 0°6, 130°.

7028 A 5983, 8.5m, 7°0, 220°.

7040 A 6001AB, 8.6m-8.6m, 0°1.

7048 9.3m to 10.1m.

7081 9.6m-9.8m, 0°5, 130°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
7082	-83	165	7.8	K5	20 33.642	0.11	4	69.714	-83 49 55.83	0.14	4	69.714				19084
7082	SP				20 33.810	0.17	4	69.536	-83 49 55.52	0.04	4	69.536				19084
7083	-16	1928	8.0	K0	20 33.895	0.40	2	70.454	-16 37 45.67	0.41	2	70.454				7675
7084	-26	4268	8.2	K0	20 34.086	0.06	4	70.201	-27 02 26.47	0.12	4	70.201				7676
7085	-45	3130	9.0	K0	20 35.540	0.20	4	70.026	-45 47 48.19	0.05	4	70.026				878
7086	-46	3102	8.8	G5	7 20 36.099	0.12	4	70.042	-46 56 01.07	0.06	4	70.042				879
7087	-69	723	8.9	K0	20 36.697	0.13	4	70.136	-70 04 27.52	0.17	4	70.136				19085
7088	-60	825	9.1	K0	20 38.420	0.13	4	69.246	-60 09 25.10	0.07	4	69.246				7677
7089	-38	3349	8.8	K0	20 49.621	0.02	4	70.029	-39 01 13.30	0.16	4	70.029				7678
7090	-36	3568	8.7	K0	20 49.750	0.11	4	69.989	-36 57 06.11	0.13	4	69.989				7679
7091	-4	1927	8.8	A2	7 20 52.358	0.13	2	70.576	-4 20 05.75	0.18	2	70.576				7680
7092*	-25	4441	7.5	M0	20 54.699	0.16	4	70.531	-25 40 12.74	0.14	4	70.531				7681
7093	-73	442	8.5	K0	20 55.793	0.06	4	70.137	-74 02 39.23	0.17	3	70.158				19086
7094	-9	2021	8.9	A0	20 56.011	0.10	2	70.585	-10 10 06.27	0.03	2	70.585				7682
7095	-6	2084	8.7	A0	20 57.961	0.19	2	70.610	-6 32 18.14	0.10	2	70.610				7683
7096	-51	2460	8.9	G5	7 20 58.729	0.08	4	69.009	-51 23 25.81	0.07	3	68.393				880
7097	-13	1979	8.3	A0	21 05.182	0.20	2	71.540	-13 15 08.72	0.31	2	71.540				7684
7098	-9	2022	8.5	F0	21 05.520	0.15	3	72.082	-9 42 42.66	0.12	3	72.082				7685
7099	-10	2023	8.8	A0	21 05.936	0.22	4	70.650	-10 26 35.42	0.05	4	70.650				26323
7100*	-1	1691	9.0	A0	21 10.790	0.09	4	71.050	-1 44 10.98	0.17	4	71.050				26324
7101	+0	1929	8.9	G0	7 21 12.278	0.11	2	71.608	+0 06 34.22	0.22	2	71.608				7686
7102	-5	2095	8.7	A0	21 13.173	0.16	4	70.786	-5 22 03.45	0.04	3	70.639				26325
7103	-19	1854	7.7	B2	21 13.761	0.11	4	70.059	-20 07 56.86	0.17	4	70.059				7687
7104	+2	1664	8.2	A2	21 25.436	0.04	2	71.485	+2 05 07.66	0.07	2	71.485				7688
7105	-58	905	9.0	G5	21 27.784	0.20	4	69.040	-58 38 16.76	0.17	4	69.040				7689
7106	-3	1878	7.05	K0	7 21 31.846	0.12	3	71.760	-3 52 49.76	0.14	3	71.760		9874		7690
7107	-52	1162	7.46	G5	21 36.548	0.06	5	69.648	-52 25 16.98	0.24	4	69.562		9875		7691
7108	-55	1226	8.6	K5	21 38.128	0.14	4	69.548	-55 28 17.29	0.16	4	69.548				7692
7109	+3	1670	7.5	K0	21 40.951	0.26	2	71.645	+3 16 35.75	0.13	2	71.645				7693
7110	-34	3570	7.5	K0	21 41.308	0.16	4	70.027	-34 25 10.60	0.12	4	70.027				7694
7111	-20	1903	8.7	A0	7 21 43.715	0.05	4	70.349	-20 36 39.35	0.15	4	70.349				7695
7112	-48	2911	8.8	K0	21 49.864	0.12	5	70.361	-48 55 02.11	0.13	4	70.427				881
7113*	+0	1933	9.0	F0	21 52.065	-	1	72.161	+0 42 45.85	-	1	72.161				26326
7114	-29	4322	6.59	B3	21 57.026	0.11	4	70.782	-30 07 06.62	0.22	4	70.782		9883		7696
7115	-41	3036	8.3	K0	21 57.271	0.08	4	70.103	-41 35 19.16	0.16	4	70.103				882
7116	-22	1853	7.7	K5	7 22 04.244	0.18	4	70.120	-22 15 49.31	0.12	4	70.120				7697
7117	-29	4328	2.43	B5p	22 06.961	0.03	70	71.498	-29 12 15.91	0.03	68	71.422	283	9886	1652	30283
7118	-11	1924	7.6	K2	22 08.604	0.01	3	71.074	-12 06 09.14	0.27	2	71.563				7698
7119	-31	4468	7.7	K	22 08.925	0.06	4	70.642	-31 47 38.03	0.04	4	70.642				7699
7120	-22	1855	6.10	B9	22 09.819	0.10	3	70.396	-22 48 49.70	0.11	3	70.396		9890		7700
7121	-0	1709	9.0	G5	7 22 13.847	0.25	2	71.668	-1 08 44.56	0.13	2	71.668				7701
7122	-17	1960	9.0	A3	22 21.548	0.23	2	71.686	-17 58 51.72	0.06	2	71.686				7702
7123	+3	1674	8.8	A2	22 23.384	0.21	2	71.528	+3 08 42.25	0.06	2	71.528				7703
7124	-43	3189	8.3	K5	22 28.757	0.07	4	70.024	-44 02 09.31	0.19	4	70.024				883
7125	-62	824	7.05	K0	22 31.111	0.24	4	69.746	-62 10 24.69	0.08	4	69.746		9895		7704
7126	-13	1996	8.4	K0	7 22 32.250	0.26	2	70.570	-14 01 24.55	0.02	2	70.570				7705
7127	+28	1385	3.89	K0	22 37.176	0.04	32	70.506	+27 53 55.20	0.07	31	70.453	282	9897	1656	80282
7128	+5	1652	8.16	K5	22 47.829	0.39	2	72.049	+4 57 01.65	0.40	2	72.049			1657	7706
7129	-67	742	8.2	K0	22 48.553	0.10	4	69.035	-67 16 02.04	0.08	4	69.035				19087
7130	-14	1887	6.59	A0	22 49.611	0.27	2	71.716	-14 47 00.28	0.34	2	71.716		9904		7707
7131	-13	2001	5.82	F0	7 22 50.181	0.04	44	71.352	-13 39 08.11	0.04	42	71.313	1192	9905	1658	31192
7132	-36	3594	8.35	K0	22 52.894	0.22	4	70.458	-36 27 28.28	0.10	4	70.458		9906		7708
7133	-30	4461	8.5	K5	22 58.828	0.09	4	69.754	-30 44 24.58	0.12	4	69.754				7709
7134	-7	1949	8.5	K5	23 02.635	0.08	2	71.977	-7 38 41.45	0.03	2	71.977				7710
7135	-32	3985	8.8	K2	23 07.256	0.08	4	70.090	-32 58 52.85	0.09	4	70.090				7711
7136	-58	909	6.64	G5	7 23 17.600	0.08	7	71.339	-58 23 36.76	0.13	6	71.353	2573	9919	1659	32573
7137	-44	3395	9.3	G5	23 18.750	0.12	4	70.633	-45 03 27.67	0.10	4	70.633				884
7138	-24	5366	5.86	B9	23 20.837	0.10	7	71.582	-25 07 03.13	0.15	6	71.491	2574	9920		32574
7139*	+8	1767	8.5	G0	23 21.707	0.06	4	72.650	+7 53 13.71	0.16	4	72.650				26332
7140	-19	1878	7.6	K0	23 21.932	0.20	2	71.551	-19 20 15.14	0.16	2	71.551				7712
7141	-1	1707	7.6	G0	7 23 25.897	0.13	3	72.030	-2 08 51.18	0.26	3	72.030				7713
7142	-67	746	8.1	A2	23 29.118	0.07	4	69.011	-67 55 20.23	0.09	4	69.011				19088
7143	-8	1909	8.6	B8	23 43.530	0.20	2	72.010	-8 59 45.20	0.02	2	72.010				7714
7144	-10	2038	8.8	A0	23 47.331	0.14	2	72.041	-10 26 53.59	0.33	2	72.041				7715
7145	-15	1820	7.6	G5	23 47.393	0.06	2	72.499	-15 33 51.53	0.21	2	72.499				7716
7146	-42	3222	9.0	K0	7 23 47.529	0.11	4	70.644	-43 01 42.38	0.10	4	70.644				885
7147	-49	2826	7.8	K0	23 51.390	0.20	4	71.022	-49 48 45.34	0.13	4	71.022				886
7148*	-33	3799	8.9	G5	23 52.562	0.17	4	70.169	-33 48 10.80	0.17	4	70.169				7717
7149*	+4	1699	8.5	G0	24 00.602	0.13	5	72.307	+4 29 38.44	0.23	5	72.307				26333
7150	-0	1721	6.88	A2	24 00.882	0.13	2	71.676	-0 22 05.42	0.03	2	71.626		9939		7718
7151	-26	4355	7.51	K0	7 24 02.840	0.06	4	69.68	-26 41 22.17	0.17	4	69.468		9941		7719
7152	-10	2040	8.6	A0	24 07.048	0.22	3	71.005	-10 50 32.55	0.15	3	71.665				7720
7153	-5	2118	7.8	K2	24 18.805	0.16	2	70.719	-5 46 03.18	0.33	2	70.719				7721
7154	-4	1950	8.5	K0	24 19.487	0.10	2	71.741	-5 06 56.29	0.49	2	71.741				7722
7155	-19	1885	8.6	K0	24 20.030	0.11	3	71.174	-19 53 52.41	0.48	2	71.713				7723

7092 A 6033AB, 7.8m-9.1m, 0°8, 211°.

7100 A 6042AB, 9.4m-9.6m, 0°3, 18°.

7113 A 6052AB, 9.0m-12.2m, 0°6, 87°.

7139 A 6071AB, 9.2m-10.7m, 0°5, 182°.

7148 9.4m-10.1m, 0°5, 153°.

7149 A 6079AB, 9.0m-10.0m, 0°5, 151°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
7156	+ 8	1774	3.09	B8	7 24 26.285	0.02	127	71.298	+ 8 23 29.03	0.03	120	71.262	285	9947	1666	80285
7157	+ 0	1944	8.5	G5	24 26.817	0.05	2	71.709	+ 0 20 06.19	0.11	2	71.709				7724
7158	+15	1573	8.4v	*	24 32.926	0.04	4	71.943	+15 45 42.19	0.26	4	71.943				26335
7159	-47	3053	7.9	K0	24 41.652	0.08	4	70.018	-48 03 59.38	0.13	4	70.018				887
7160	+ 1	1811	7.2	K0	24 43.593	0.07	2	71.610	+ 1 33 16.98	0.14	2	71.610				7725
7161*	+ 7	1726	8.7	A2	7 24 45.179	0.15	4	72.678	+ 6 55 59.75	0.31	4	72.678				26336
7162	-79	247	8.9	G5	24 46.856	0.12	4	69.728	-79 51 45.14	0.09	4	69.728				19089
7162 SP					24 46.855	0.15	4	69.588	-79 51 44.88	0.23	4	69.588				19089
7163	- 2	2118	8.7	G8	24 52.390	0.19	2	70.568	- 2 25 21.31	0.10	2	70.568				7726
7164	-11	1945	8.7	A0	24 59.721	0.12	2	70.490	-11 23 23.06	0.10	2	70.490				7727
7165	-62	832	9.1	G5	7 25 04.195	0.07	4	69.559	-62 57 32.76	0.07	4	69.559				7728
7166	-50	2761	5.11	K0	25 04.841	0.09	6	69.650	-50 55 00.41	0.08	6	69.650	2575	9964		32575
7167	-71	574	6.52	A2	25 08.704	0.13	7	70.100	-71 22 12.70	0.14	6	69.912	2576	9967		32576
7167 SP					25 08.656	0.09	31	71.236	-71 22 12.42	0.19	28	71.209	2576	9967		52576
7168	-51	2499	8.6	K0	25 14.645	0.05	4	69.591	-51 54 36.38	0.14	4	69.591				7729
7169	-18	1846	7.4	A0	7 25 21.460	0.03	2	70.483	-18 23 21.53	0.45	2	70.483		9971		7730
7170	- 2	2126	6.85	K0	25 29.066	0.01	2	70.577	- 2 46 45.55	0.15	2	70.577		9976		7731
7171	-70	648	8.08	K0	25 29.674	0.09	4	69.580	-70 18 09.60	0.28	4	69.580		9978		19090
7172	-24	5435	8.5	G5	25 39.826	0.09	4	69.064	-24 40 16.67	0.09	4	69.064				7732
7173	- 9	2064	8.8	K2	25 42.368	0.08	2	70.547	- 9 11 14.15	0.12	2	70.547				7733
7174	+ 4	1714	8.3	G5	7 25 47.734	0.00	2	70.629	+ 4 15 24.65	0.24	2	70.629				7734
7175	-23	5519	8.2	G5	25 48.760	0.14	4	69.563	-23 23 11.48	0.06	4	69.563				7735
7176	-14	1914	8.6	A0	25 51.026	0.03	2	71.641	-14 44 14.54	0.11	2	71.641				7736
7177	-60	839	8.8	K0	25 53.471	0.14	4	70.071	-60 53 31.62	0.26	4	70.071				7737
7178	-50	2770	9.0	K2	25 53.966	0.06	5	70.520	-50 26 34.02	0.23	4	70.118				888
7179	-44	3434	8.4	K0	7 25 58.338	0.16	4	69.544	-44 42 46.79	0.10	4	69.544				889
7180	-31	4558	8.5	K0	25 59.860	0.13	4	69.477	-31 50 41.77	0.11	4	69.477				7738
7181	-68	638	9.1	K0	26 00.261	0.05	4	70.567	-68 38 05.21	0.19	4	70.567				19091
7182	-34	3619	8.74	F5	26 04.978	0.22	4	70.001	-34 47 15.37	0.11	4	70.001		9991		7739
7183	-59	829	7.67	K0	26 11.711	0.19	4	69.623	-59 28 33.94	0.27	4	69.623		9996		7740
7184	-36	3639	9.1	K0	7 26 11.727	0.04	4	70.044	-36 55 09.95	0.17	4	70.044				7741
7185	-54	1280	9.3	K5	26 20.765	0.21	4	70.606	-54 11 03.96	0.11	4	70.606				7742
7186			9.0	--	26 25.177	0.21	4	71.822	+ 6 52 19.65	0.42	4	71.822				26339
7187	-21	1956	7.9	K0	26 32.092	0.16	4	69.305	-21 42 03.09	0.08	4	69.305				7743
7188	-46	3179	7.48	K0	26 32.188	0.08	4	70.023	-47 00 16.23	0.16	4	70.023		10005		890
7189	-35	3618	7.44	A3	7 26 33.279	0.13	4	70.492	-35 09 22.67	0.07	3	70.350		10006		7744
7190	+19	1743	6.79	K0	26 34.800	0.10	7	70.914	+19 44 15.00	0.16	6	70.861	2577	10008	1677	32577
7191	-65	762	8.0	G5	26 39.054	0.16	4	70.608	-65 29 40.72	0.11	4	70.608				19092
7192	-33	3844	9.0	K2	26 39.077	0.22	4	70.539	-33 22 28.32	0.09	4	70.539				7745
7193	+ 3	1693	8.0	A5	26 40.471	0.19	3	71.070	+ 3 29 04.39	0.11	2	71.557				7746
7194	-12	1989	8.4	A0	7 26 42.961	0.26	2	70.464	-12 14 52.73	0.09	2	70.464				7747
7195	-63	738	8.2	K5	26 46.515	0.04	5	71.273	-64 08 13.92	0.15	5	71.273				19093
7196	- 1	1738	5.80	K2	26 46.950	0.09	8	71.792	- 1 48 03.38	0.13	5	72.015	2578	10017		32578
7197	-29	4442	8.3	A5	26 48.856	0.04	4	70.674	-29 24 17.15	0.10	4	70.674				7748
7198	-39	3336	8.2	G5	26 50.281	0.12	4	70.537	-39 20 33.31	0.11	4	70.537				7749
7199	-52	1187	9.1	K0	7 26 50.928	0.14	5	71.410	-53 08 00.30	0.12	5	71.410				7750
7200	-15	1851	8.9	A5	26 56.701	0.01	2	70.968	-16 02 44.87	0.15	2	70.968				7751
7201	-10	2067	6.00	K2	26 59.601	0.12	6	71.385	-10 13 19.52	0.13	6	71.385	2579	10022		32579
7202	-12	1991	7.9	K0	27 00.117	0.09	2	71.525	-12 02 04.96	0.06	2	71.525				7752
7203	+12	1567	4.85	K0	27 00.822	0.09	6	72.601	+12 06 41.04	0.16	6	72.601	1193	10024	1680	31193
7204	-65	763	8.8	K0	7 27 08.970	0.11	4	70.745	-66 09 05.39	0.18	4	70.745				19094
7205	-13	2044	8.8	K2	27 12.452	0.05	2	70.650	-13 22 14.03	0.10	2	70.650				7753
7206	-30	4579	7.8	K5	27 17.519	0.18	3	69.727	-30 32 21.93	0.09	4	69.611				7754
7207	-32	4063	8.3	K2	27 18.668	0.16	4	70.664	-32 38 30.00	0.11	4	70.664				7755
7208	-42	3269	9.1	G5	27 20.100	0.06	5	70.905	-43 03 32.28	0.11	4	71.106				891
7209	-38	3400	5.41	B8	7 27 21.730	0.12	6	70.909	-38 42 27.56	0.10	6	70.909	2580	10033		32580
7210	-35	3627	9.3	K5	27 23.164	0.16	4	71.283	-35 16 23.86	0.16	4	71.283				7756
7211	-76	453	8.8	K2	27 29.207	0.06	4	69.490	-77 05 02.69	0.16	4	69.490				19095
7211 SP					27 29.064	0.42	5	69.917	-77 05 02.36	0.37	4	70.027				19095
7212	-58	916	8.9	G5	27 29.471	0.07	4	69.570	-58 25 54.73	0.16	4	69.570				7757
7213	- 3	1920	9.0	G5	7 27 31.093	0.06	2	71.580	- 3 39 12.35	0.10	2	71.580				7758
7214	-14	1928	8.2	F0	27 35.743	0.28	2	71.055	-14 15 11.50	0.06	2	71.055				7759
7215	-43	3260	3.28	K5	27 38.479	0.04	21	71.062	-43 11 53.51	0.09	20	71.010	1194	10040	1682	31194
7216	-17	2000	8.7	K0	27 39.784	0.07	3	72.100	-17 25 38.77	0.03	3	72.100				7760
7217	-36	3658	7.4	M0	27 42.596	0.11	4	70.621	-36 34 47.25	0.18	4	70.621				7761
7218n	-22	1897	4.80	A3	7 27 43.888	0.11	4	70.059	-22 55 08.71	0.06	4	70.059		10043		7762
7219	- 6	2141	8.6	K0	27 46.238	0.11	2	70.997	- 6 34 18.11	0.14	2	70.997				7763
7220	-43	3264	9.1	G5	27 54.864	0.05	4	70.574	-43 57 04.19	0.12	4	70.574				892
7221	-16	1978	8.5	K0	27 56.445	0.04	2	72.035	-16 57 45.13	0.03	2	72.035				7764
7222	-76	454	9.4	G0	27 57.338	0.11	4	69.721	-76 33 59.60	0.03	4	69.721				19096
7222 SP					7 27 57.250	0.27	4	70.425	-76 33 58.61	0.18	4	70.425				19096
7223	- 0	1738	8.9	M0	27 57.626	0.01	2	72.555	- 0 31 28.63	0.32	2	72.555				7766
7224	+ 4	1722	8.3	K0	27 57.633	0.15	2	71.020	+ 4 39 36.28	0.25	2	71.020				7765
7225	-61	827	9.2	K0	28 08.139	0.22	4	69.573	-61 30 01.40	0.11	4	69.573				7767
7226*	-38	3411	8.5	G0	28 13.929	0.14	4	70.055	-38 33 41.41	0.23	4	70.055				7768

7158 8.4m to 11.2m. A2p+K2.

7161 A 6090AB, 9.3m-10.0m, 0°4, 356°.

7218 10.7m, 2°9, 180°.

7226 SDS, 8.7m-11.2m, 1°3, 303°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
7227	-20	1980	8.0	A0	7 28 16.551	0.03	4	71.616	-20 42 08.22	0.11	4	71.616				7769
7228	-4	1979	6.38	K0	28 23.004	0.06	6	72.976	-5 07 13.30	0.11	5	73.145	2582	10053	1683	32582
7229	-28	4443	8.4	K5	28 23.732	0.21	4	71.071	-28 13 37.00	0.09	4	71.071				7771
7230	-15	1868	8.1	G5	28 23.821	--	1	72.903	-15 53 16.26	--	1	72.903				7770
7231	-78	265	5.42	K2	28 25.280	0.10	6	68.579	-78 59 27.86	0.12	6	68.579	2583	10055	1685	32583
7231	SP				7 28 25.195	0.10	6	70.208	-78 59 27.23	0.26	6	70.208	2583	10055	1685	52583
7232	-64	721	6.28	K5	28 27.154	0.13	6	71.435	-64 24 17.13	0.17	6	71.435	2584	10057		32584
7233	-9	2086	6.97	K2	28 35.938	0.10	2	72.074	-10 00 04.47	--	1	71.910		10062		7772
7234	+2	1688	7.9	G0	28 37.346	0.13	3	71.126	+2 16 36.82	0.17	2	71.641				7773
7235	-0	1743	6.60	G5	28 44.761	0.18	3	72.337	-1 01 09.63	0.20	3	72.337		10068		7774
7236	-5	2145	8.4	F8	7 28 47.456	0.16	2	72.123	-5 14 17.32	0.43	2	72.123				7775
7237	-49	2880	10.0	K0	28 47.769	0.10	4	70.601	-49 58 22.97	0.10	4	70.601				893
7238	-7	2012	8.5	K0	28 49.329	--	1	72.232	-7 39 12.80	--	1	72.232				7776
7239	-4	1984	8.0	K0	28 52.591	0.02	2	72.556	-4 34 20.58	0.04	2	72.556				7777
7240	+17	1596	5.64	K0	28 55.547	0.12	6	70.659	+17 11 36.81	0.15	6	70.659	2585	10073	1688	32585
7241	-8	1955	7.8	K2	7 28 59.707	0.01	2	70.596	-8 38 00.01	0.06	2	70.596				7778
7242	-57	1239	8.3	K2	28 59.898	0.14	4	70.532	-57 17 18.87	0.08	4	70.532				7779
7243	-56	1358	7.79	K5	29 06.325	0.06	5	70.833	-56 12 46.15	0.13	5	70.833		10076		7780
7244	-34	3660	7.72	K5	29 11.378	0.08	5	70.857	-34 52 39.27	0.11	4	71.047		10078		7781
7245	+1	1833	7.6	K0	29 14.091	0.16	2	71.983	+1 16 21.29	0.36	2	71.983				7782
7246	-19	1929	7.7	K5	7 29 18.229	0.08	2	71.589	-19 24 15.78	0.04	2	71.589				7783
7247	-27	4171	8.7	F8	29 19.316	0.06	4	70.610	-27 18 17.68	0.15	4	70.610				7784
7248	-54	1294	5.94	K5	29 23.225	0.10	8	70.734	-54 17 35.50	0.12	6	70.620	2586	10083	1690	32586
7249	-45	3242	8.8	K0	29 26.253	0.13	4	70.128	-45 47 18.34	0.11	4	70.128				894
7250	+2	1691	5.26	A5	29 30.095	0.09	6	69.364	+2 01 18.94	0.14	6	69.364	2587	10085		32587
7251	-26	4490	8.4	K5	7 29 34.949	0.10	3	69.854	-26 24 28.37	0.13	4	69.705				7785
7252	-47	3107	8.7	K5	29 35.169	0.19	5	70.393	-48 09 17.20	0.14	5	70.393				895
7253	-22	1912	8.4	K2	29 50.506	0.09	4	70.787	-22 48 39.81	0.19	4	70.787				7786
7254	-0	1750	7.8	F5	29 53.215	0.37	2	70.595	-0 24 36.70	0.26	2	70.595		10093		7787
7255	-18	1893	8.0	F0p	30 03.130	0.04	2	70.751	-18 24 35.70	0.20	2	70.751				7788
7256	-2	2167	8.8	A0	7 30 04.725	0.03	2	70.558	-2 39 12.63	0.03	2	70.558				7789
7257	-41	3145	9.2	K0	30 08.786	0.22	5	69.906	-41 53 28.13	0.12	4	69.905				896
7258	-56	1364	7.65	K0	30 10.755	0.02	4	70.084	-56 31 02.42	0.15	4	70.084		10099		7790
7259	-51	2544	9.2	K0	30 16.734	0.23	4	70.709	-51 29 51.03	0.08	4	70.709				897
7260	-1	1756	6.76	A0	30 17.790	0.04	2	70.522	-1 55 33.57	0.14	2	70.522		10100		7791
7261	-24	5556	8.5	F8	7 30 32.075	0.20	3	69.972	-24 27 52.39	0.14	3	69.972				7792
7262	-20	2011	8.0v	K0	30 36.745	0.13	4	70.585	-20 48 04.39	0.08	4	70.585		10105		7793
7263	+1	1842	8.4	G5	30 37.007	0.10	3	71.024	+0 57 49.35	0.08	2	71.488				7794
7264	-66	706	8.8	K0	30 39.495	0.16	4	70.620	-66 14 28.46	0.16	4	70.620				19097
7265	-13	2084	8.2	A0	30 49.707	0.17	2	70.563	-13 18 41.14	0.09	2	70.563				7795
7266	-63	749	8.2	K2	7 30 49.914	0.16	5	70.655	-63 19 18.85	0.12	5	70.655				7796
7267	-14	1964	8.6	A0	30 50.778	0.03	2	71.544	-15 04 10.43	0.31	2	71.544				7797
7268	-80	223	8.9	G5	30 55.112	0.13	4	70.005	-80 43 05.84	0.17	4	70.005				19098
7268	SP				30 55.148	0.18	4	69.572	-80 43 05.86	0.33	4	69.572				19098
7269	-4	1996	8.5	K0	30 57.024	0.08	2	71.505	-4 18 28.39	0.08	2	71.505				7798
7270	-64	728	7.59	F5	7 30 58.484	0.10	4	70.109	-64 15 53.29	0.09	4	70.109		10111		19099
7271	-54	1300	8.7	K5	30 59.001	0.08	4	69.517	-54 53 41.53	0.11	4	69.517				7799
7272	-65	771	8.4	K5	31 00.227	0.09	4	70.576	-65 30 24.37	0.20	4	70.576				19100
7273	-31	4690	8.1	K5	31 00.971	0.10	4	70.561	-31 21 07.44	0.29	4	70.561				7800
7274	-14	1966	6.24	B5	31 04.089	0.17	2	71.514	-14 13 45.66	0.20	2	71.514		10113		7801
7275	-47	3125	8.8	K7	7 31 11.190	0.14	4	69.521	-47 11 15.78	0.09	4	69.521				1017
7276	+3	1718	8.2	K5	31 19.663	0.13	2	71.566	+3 45 38.89	0.20	2	71.566				7802
7277	-29	4560	8.6	K5	31 22.835	0.17	4	70.080	-29 42 51.97	0.21	4	70.080				7803
7278	-40	3227	8.6	G5	31 31.631	0.09	4	69.997	-40 25 26.37	0.13	4	69.997				898
7279	-10	2104	8.7	A0	31 41.218	0.10	2	71.645	-10 56 15.40	0.02	2	71.645				7804
7280	-1	1765	8.1	G5	7 31 47.225	0.13	2	71.731	-1 12 30.42	0.17	2	71.731				7805
7281	-28	4522	6.61	F0	31 52.044	0.05	4	70.574	-28 27 29.15	0.13	4	70.574		10132	1698	7806
7282	-21	2007	4.52	F8	31 54.628	0.02	126	71.345	-22 11 11.72	0.03	116	71.310	288	10134	1699	30288
7283	-15	1904	6.89	G5	31 57.342	0.14	6	69.565	-16 04 44.06	0.16	6	69.565	2588	10135		32588
7284	-6	2184	8.5	K0	31 59.943	0.07	2	72.029	-6 47 10.54	0.43	2	72.029				7807
7285	-35	3681	7.8	K0	7 32 00.973	0.11	4	69.979	-35 42 15.85	0.11	4	69.979				7808
7286	-19	1950	6.81	B3	32 01.657	0.26	3	70.504	-20 01 38.68	0.16	4	70.193		10138		7809
7287	+0	1997	8.6	B9	32 03.848	0.10	2	72.438	+0 17 04.72	0.27	2	72.438				7810
7288	-34	3709	9.0	G5	32 04.106	0.12	4	70.476	-34 54 07.21	0.21	3	70.329				7811
7289	-74	446	8.5	K0	32 05.580	0.09	4	69.955	-74 49 18.29	0.22	4	69.955				19101
7290	-12	2035	8.4	K5	7 32 06.371	0.12	2	72.052	-12 14 57.94	0.22	2	72.052				7812
7291	+2	1703	8.0	K0	32 09.008	0.03	2	72.055	+2 31 53.43	0.29	2	72.055				7813
7292	-9	2114	8.3	G5	32 10.251	0.13	2	72.456	-9 44 59.71	0.07	2	72.456				7814
7293	-33	3924	8.8	--	32 12.933	0.17	4	70.018	-33 53 15.40	0.16	4	70.018				7815
7294	-71	588	9.1	A5	32 18.858	0.13	4	69.041	-71 53 44.90	0.14	4	69.041				19102
7295	+4	1751	7.00	K0	7 32 20.959	0.08	2	70.988	+4 33 00.75	0.14	2	70.988		10152		7816
7296	-20	2037	8.2	A2	32 24.490	0.07	4	70.287	-21 11 45.84	0.10	4	70.287				7817
7297	-41	3169	8.7	K2	32 26.904	0.07	4	70.071	-41 32 08.10	0.20	4	70.071				899
7298	-32	4160	9.2	K0	32 28.091	0.14	4	70.617	-32 12 47.23	0.08	4	70.617				7818
7299	-49	2914	8.49	K0	32 29.192	0.09	4	70.053	-49 38 27.21	0.16	4	70.053		10160		900

7262 8.0m to 9.0m.

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*	
7300	-45°	3281	8.6	K0	7 32 34.998	0.09	4	70.523	-45° 46' 59.54	0.17	4	70.523				901	
7301	-58	935	7.19	K5	32 38.354	0.05	4	69.520	-59 05 18.70	0.05	3	69.074		10162		7819	
7302	-50	2837	9.6	G5	32 38.859	0.12	4	70.123	-50 45 22.56	0.22	3	69.403				902	
7303	-16	2027	9.0	F2	32 39.905	0.22	2	72.568	-17 00 12.97	0.34	2	72.568				7820	
7304	-29	4596	7.7	K0	32 48.404	0.14	4	70.112	-29 17 56.82	0.04	4	70.112				7821	
7305	+27	1424	4.22	K5	7 32 50.541	0.08	6	70.735	+27 00 28.77	0.17	6	70.735	1196	10167	1703	31196	
7306	-46	3246	7.9	K0	32 50.954	0.04	3	70.433	-46 38 58.17	0.25	3	70.433				903	
7307	-38	3463	8.9	K2	32 55.303	0.05	4	70.656	-38 42 48.43	0.19	4	70.656				7822	
7308	+2	1707	8.7	K2	32 55.535	0.01	2	71.962	+2 38 18.49	0.44	2	71.962				7823	
7309	-25	4738	7.90	K0	33 02.899	0.06	4	70.785	-26 00 30.01	0.18	4	70.785		10170		7824	
7310	-16	2031	8.6	K2	7 33 04.085	0.07	2	72.581	-16 17 26.71	0.13	2	72.581				7825	
7311	-15	1914	7.5	K5	33 06.623	0.02	2	72.093	-15 16 16.69	0.11	2	72.093				7826	
7312	-84	144	8.7	K5	33 06.991	0.18	4	70.175	-84 14 04.28	0.17	4	70.175				19103	
7312 SP					33 06.556	0.05	4	70.430	-84 14 04.04	0.32	4	70.430				19103	
7313	-17	2053	8.8	K0	33 07.646	0.05	2	72.555	-17 48 58.46	0.07	2	72.555				7827	
7314	-61	845	8.9	K0	7 33 08.861	0.08	4	70.093	-61 47 56.47	0.12	4	70.093				7828	
7315	-75	452	8.8	F2	33 09.540	0.15	4	69.458	-75 25 04.64	0.19	4	69.458				19104	
7315 SP					33 09.492	0.14	4	69.536	-75 25 04.16	0.31	4	69.536				19104	
7316	-40	3250	9.4	G5	33 11.054	0.13	4	71.273	-40 37 00.71	0.13	4	71.273				904	
7317	-13	2111	8.6	K0	33 17.582	0.07	2	72.482	-13 42 43.28	0.40	2	72.482				7829	
7318	+18	1678	8.7	A0	7 33 17.764	0.13	4	72.886	+18 22 09.89	0.20	4	72.886				26352	
7319*	-59	849	7.98	F5	33 20.515	0.16	5	70.972	-60 07 58.78	0.23	5	70.972		10177		7830	
7320	-8	1991	8.5	A2	33 22.898	-	1	71.968	-8 14 08.10	-	1	71.968				7831	
7321	-52	1224	7.9	K5	33 25.918	0.14	4	71.280	-52 41 56.52	0.12	4	71.280				7832	
7322	-2	2197	7.10	G5	33 31.511	0.03	2	72.029	-3 02 27.09	0.08	2	72.029		10185		7833	
7323	-53	1367	8.4	K5	7 33 32.340	0.15	4	70.751	-53 48 29.59	0.11	4	70.751				7834	
7324	-5	2178	8.2	K0	33 39.085	-	1	71.984	-5 40 05.76	-	1	71.984				7835	
7325	-37	3699	7.97	K0	33 39.582	0.10	4	70.078	-37 18 31.17	0.12	4	70.078		10188		7836	
7326	-72	611	9.1	A2	33 42.907	0.10	4	70.639	-72 28 39.25	0.18	4	70.639				19105	
7327	-55	1273	8.1	G5	33 45.417	0.11	5	71.180	-55 39 44.38	0.12	5	71.180				7837	
7328	-29	4623	8.5	B9	7 33 46.391	0.13	4	70.536	-29 56 49.90	0.15	4	70.536				7838	
7329	-23	5756	6.83	K0	33 47.214	0.13	4	71.024	-23 26 12.20	0.15	4	71.024		10190	1708	7839	
7330	-58	940	9.0	G5	33 49.619	0.09	5	71.258	-58 32 43.40	0.28	5	71.258				7840	
7331	+3	1735	8.0	A0	33 51.596	-	1	70.268	+3 58 48.67	-	1	70.268				7841	
7332	-69	748	8.5	K5	33 55.877	0.09	5	71.088	-69 46 49.32	0.18	5	71.088				19106	
7333	-63	754	8.8	K0	7 34 00.090	0.09	4	71.027	-63 22 58.55	0.16	4	71.027				7842	
7334	-21	2032	7.9	G5	34 03.131	0.02	3	69.798	-21 48 16.89	0.14	4	69.664			1710	7843	
7335	-36	3734	7.9	K0	34 06.004	0.06	5	70.858	-36 57 57.03	0.07	4	71.048				7844	
7336	-27	4291	7.5	K2	34 06.412	0.11	4	70.141	-27 23 29.94	0.21	4	70.141				7845	
7337	-23	5773	8.2	K0	34 08.075	0.18	4	70.656	-23 43 33.71	0.13	4	70.656				7846	
7338	-51	2579	10.2	A0	7 34 09.795	0.09	5	71.804	-51 52 19.97	0.14	4	71.486				905	
7339	-57	1271	8.7	G5	34 18.504	0.11	4	70.624	-57 28 08.57	0.17	4	70.624				7847	
7340	-30	4787	8.9	K0	34 19.497	0.13	4	71.036	-30 32 27.98	0.14	4	71.036				7848	
7341	-52	1231	4.92	K5	34 25.538	0.03	80	71.145	-52 25 17.67	0.03	74	71.139	1198	10206	1712	31198	
7342	-19	1967	5.66	B3	34 29.116	0.04	19	70.729	-19 35 22.54	0.04	17	70.667	1197	10208	1713	31197	
7343	-3	1979	5.17	F5	7 34 47.411	0.02	91	71.175	-3 59 52.27	0.03	90	71.164	289	10217	1715	80289	
7344	-78	268	8.9	K5	34 47.503	0.09	4	70.061	-78 59 08.81	0.14	4	70.061				19107	
7344 SP					34 47.433	0.31	4	70.574	-78 59 09.01	0.19	4	70.574				19107	
7345	-1	1779	7.7	K5p	34 57.356	0.47	2	70.464	-1 55 24.03	0.02	2	70.464			1716	7849	
7346	-53	1374	8.7	K5	35 00.673	0.16	4	70.067	-53 44 42.55	0.13	4	70.067				7850	
7347	-19	1975	8.5	G5	7 35 00.751	0.09	4	69.001	-20 10 58.00	0.16	4	69.001				7851	
7348	+2	1720	6.78	B9	35 05.755	0.03	3	71.160	+2 02 31.04	0.30	2	71.692		10229		7852	
7349	-18	1932	8.6	K5	35 09.789	0.31	2	70.482	-18 21 08.21	0.26	2	70.482				7853	
7350*	-6	2206	9.2	A2	35 17.907	0.15	4	72.284	-7 08 28.85	0.32	4	72.284				26360	
7351	-7	2083	8.6	K2	35 19.393	0.18	2	70.692	-7 20 20.96	0.23	2	70.692				7854	
7352	-48	3069	5.86	B9	7 35 19.830	0.12	7	70.301	-48 43 00.69	0.16	6	70.003	2591	10241		32591	
7353	-44	3586	7.84	G5	35 22.180	0.09	4	70.556	-44 54 53.44	0.26	4	70.556		10243		906	
7354	-2	2208	8.4	A3	35 24.213	0.04	2	70.968	-3 09 49.86	0.15	2	70.968				7855	
7355	-6	2207	6.72	B9	35 25.209	0.10	2	71.039	-6 50 38.46	0.25	2	71.039		10244		7856	
7356	-6	2210	9.1	A2	35 29.230	0.12	4	71.684	-6 29 28.66	0.03	4	71.684				26363	
7357	-34	3755	4.62	B8	7 35 30.978	0.03	58	71.163	-34 51 17.74	0.03	55	71.109		290	10246	1721	30290
7358	-38	3507	8.7	F5	35 32.379	0.11	5	70.938	-39 05 17.38	0.13	4	70.649				7857	
7359	+4	1769	8.7	B9	35 46.235	0.07	2	70.674	+4 09 32.65	0.12	2	70.674				7858	
7360	-10	2137	7.9	K5	35 49.507	0.25	2	70.665	-10 29 55.67	0.27	2	70.665				7859	
7361	+13	1722	8.6	F0	35 52.755	0.03	5	71.333	+13 08 40.49	0.10	4	71.437				26364	
7362	-34	3760	6.54	K0	7 35 54.148	0.14	5	70.912	-35 09 47.42	0.09	4	71.115		10256		7860	
7363	-37	3735	8.8	G5	35 55.665	0.09	4	70.614	-37 50 18.03	0.16	4	70.614				7861	
7364	-42	3364	9.2	G0	35 56.846	0.18	5	71.101	-42 46 29.46	0.13	5	71.101				907	
7365	-47	3180	8.9	K7	36 09.578	0.07	4	70.992	-47 30 35.25	0.02	4	70.992				908	
7366*	+3	1744	9.0	A2	36 13.691	0.15	4	71.122	+3 22 09.93	0.28	3	71.087				26366	
7367	-51	2601	7.3	G5	7 36 14.624	0.10	4	69.104	-51 18 25.22	0.20	4	69.104				909	
7368	-4	2028	7.9	F0	36 14.789	0.13	4	70.943	-4 52 35.03	0.20	4	70.943				26367	
7369	-21	2052	8.7	B9	36 16.174	0.28	4	69.559	-21 42 38.76	0.19	4	69.559				7862	
7370	-36	3765	8.7	K2	36 20.485	0.03	4	71.004	-36 23 21.60	0.13	3	71.033				7863	
7371	+0	2029	7.5	M0	36 23.248	0.04	2	71.546	-0 08 43.10	0.02	2	71.546				7864	

7319 8.1m-10.6m, 0°8, 61°.
7350 A 6233, 9.6m-9.6m, 0°7, 254°.

7366 A 6242AB, 9.0m-9.0m, 0°8, 11°.

CATALOG OF 23,001 STARS FOR 1950.0

337

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
7372	-4	2031	8.4	B9	7 36 24.579	0.07	2	70.680	-4 40 44.55	0.18	2	70.680				7865
7373	-43	3414	7.98	K2	36 25.603	0.10	4	71.033	-43 31 37.18	0.17	4	71.033	10271			910
7374	-67	786	8.0	G5	36 29.635	0.08	4	69.070	-67 29 55.99	0.24	4	69.070				19108
7375	-32	4239	8.2	K0	36 30.744	0.10	4	70.553	-32 38 44.06	0.16	4	70.553				7866
7376	-14	2065	8.4	K2	36 32.144	0.17	2	71.599	-14 58 06.73	0.17	2	71.599				7867
7377	-26	4703	7.5	B9	7 36 36.001	0.10	4	69.566	-26 12 06.21	0.14	4	69.566				7868
7378*	+5	1739	0.48	F5	36 40.141	0.02	88	71.956	+5 20 54.44	0.03	83	71.973	291	10277	1726	30291
7379	-9	2156	8.7	A0	36 45.969	0.27	2	71.481	-9 50 38.13	0.15	2	71.481				7869
7380	-18	1946	6.44	B9	36 53.876	0.08	2	70.513	-18 33 46.96	0.22	2	70.513	10290			7870
7381	-35	3750	7.9	K0	36 56.771	0.18	4	70.453	-35 41 15.83	0.06	4	70.453				7871
7382	-29	4712	8.7	K2	7 37 02.609	0.15	4	70.799	-29 52 34.80	0.12	4	70.799				7872
7383	-16	2069	6.52	K2	37 08.805	0.07	2	70.643	-16 43 53.16	0.08	2	70.643	10295			7873
7384*	+1	1873	8.8	F8	37 09.257	0.15	4	70.138	+1 24 06.35	0.21	4	70.138				26371
7385	-31	4862	8.6	G0	37 11.508	0.06	4	70.057	-31 59 17.22	0.17	4	70.057				7874
7386	-53	1391	7.72	K5	37 14.802	0.04	4	69.503	-54 00 05.96	0.11	4	69.503	10297			7875
7387	-13	2157	8.0	K5	7 37 16.701	0.13	4	71.554	-13 46 10.58	0.16	3	72.040				7876
7388	-5	2202	7.8	G5	37 21.804	0.07	2	71.970	-5 07 41.95	0.10	2	71.970				7877
7389	-23	5865	8.2	K0	37 22.817	0.07	4	70.543	-24 06 50.26	0.09	4	70.543				7878
7390	-17	2081	7.4	A0	37 23.649	0.04	3	71.231	-17 45 19.57	0.10	2	71.216			1728	7879
7391	-52	1239	9.0	K0	37 24.468	0.05	4	69.525	-52 23 21.64	0.09	4	69.525				7880
7392	+2	1733	8.8	A2	7 37 25.003	--	1	70.066	+2 12 59.92	--	1	70.066				7881
7393	-30	4883	8.8	K2	37 25.328	0.06	4	70.074	-30 55 07.62	0.06	4	70.074				7882
7394	-15	1966	7.8	K5	37 26.669	0.01	2	70.745	-15 42 42.47	0.15	2	70.745				7883
7395	-33	4006	8.1	K2	37 31.651	0.09	4	70.089	-33 39 47.34	0.15	4	70.089				7884
7396	-28	4674	7.34	K2	37 39.168	0.11	3	70.395	-29 04 29.85	0.09	4	70.111	10310			7885
7397	-38	3532	7.8	K0	7 37 44.678	0.09	5	70.425	-38 44 52.90	0.17	4	70.506				7886
7398	-25	4867	8.2	K2	37 49.825	0.13	4	69.094	-25 43 46.59	0.19	4	69.094				7887
7399	-34	3785	7.8	K2	37 50.025	0.15	4	69.641	-34 14 45.69	0.08	4	69.641				7888
7400	-62	857	8.5	K5	37 54.149	0.09	4	69.555	-62 18 04.47	0.38	4	69.555				7889
7401	-24	5746	8.1	K5	37 55.748	0.08	4	69.036	-24 36 20.45	0.06	4	69.036				7890
7402	+23	1780	6.18	K5	7 37 58.961	0.12	7	69.224	+23 08 08.72	0.14	6	68.942	2595	10318	1730	32595
7403	-11	2054	6.61	K2	37 59.855	0.22	2	70.986	-11 38 08.52	0.12	2	70.986				7891
7404	-77	321	6.48	K2	38 06.968	0.09	6	69.636	-77 31 11.39	0.11	6	69.636	2596	10329		32596
7404	SP				38 07.025	0.18	6	69.634	-77 31 11.06	0.40	6	69.634	2596	10329		52596
7405	+4	1781	7.7	K0	38 10.939	0.11	2	71.549	+4 11 23.07	0.34	2	71.549				7892
7406	-43	3442	9.2	A2	7 38 12.554	0.16	4	69.644	-43 45 20.71	0.10	4	69.644				911
7407	-70	671	9.3	G	38 17.662	0.22	4	69.544	-70 45 54.37	0.26	4	69.544				19109
7408	+0	2041	8.14	A0	38 23.405	0.04	3	71.795	+0 44 39.30	0.06	2	71.644	10336			7893
7409	-27	4389	7.9	K2	38 28.936	0.15	4	69.484	-28 06 08.25	0.11	4	69.484				7894
7410	-8	2026	8.6	K2	38 33.728	0.12	2	71.696	-8 15 32.29	0.23	2	71.696				7895
7411	-20	2109	8.6	A0	7 38 35.520	0.23	4	70.102	-20 50 17.66	0.22	4	70.102				7896
7412	-45	3366	7.40	K2	38 37.506	0.17	4	69.995	-45 13 56.79	0.08	4	69.995	10342			912
7413	-22	1978	8.8	G0	38 45.584	0.13	4	69.046	-22 18 12.39	0.11	4	69.046				7897
7414	-9	2172	4.07	K0	38 51.364	0.01	182	71.454	-9 25 59.85	0.02	177	71.444	293	10345	1738	80293
7415	-72	619	8.5	K0	39 11.621	0.15	4	68.558	-73 03 21.16	0.13	4	68.558				19110
7416	+14	1729	5.81	M3	7 39 14.096	0.09	6	69.611	+14 19 36.77	0.14	6	69.611	2597	10351		32597
7417	-39	3492	8.6	G5	39 23.401	0.11	5	70.449	-39 18 26.37	0.09	4	70.537				7898
7418	-49	2986	7.8	F2	39 30.395	0.08	4	70.003	-49 34 47.07	0.07	4	70.003				913
7419	-3	2019	8.5	K5	39 42.413	--	1	70.066	-3 24 02.95	--	1	70.066	10360			7899
7420	-11	2067	8.7	B9	39 51.604	0.15	3	71.069	-11 13 50.93	0.03	2	71.555				7900
7421	-78	270	8.8	M1	7 39 52.568	0.12	4	70.025	-78 14 56.30	0.32	4	70.025				19111
7421	SP				39 52.429	0.19	4	69.555	-78 14 56.97	0.56	4	69.555				19111
7422	-16	2089	8.6	K0	39 58.380	0.21	2	70.599	-16 59 44.24	0.07	2	70.599				7901
7423	-2	2251	8.2	A0	40 07.645	0.16	2	70.614	-2 33 53.59	0.13	2	70.614				7902
7424	-29	4805	6.86	B3	40 07.995	0.13	4	69.963	-30 04 03.03	0.19	4	69.963	10372			7903
7425	-30	4952	9.0	K2	7 40 11.295	0.24	3	69.789	-30 58 36.46	0.09	4	69.657				7904
7426	+1	1885	7.6	A3	40 14.724	0.07	2	70.621	+1 43 43.12	0.07	2	70.621				7905
7427	-9	2183	8.8	K2	40 15.364	0.11	2	70.543	-9 25 40.10	0.01	2	70.543				7906
7428	-19	2018	8.7	K5	40 17.258	0.09	2	70.615	-19 18 00.85	0.11	2	70.615				7907
7429	-67	796	9.0	K0	40 23.652	0.05	4	69.033	-68 09 01.43	0.07	4	69.033				19112
7430	-47	3236	9.4	K2	7 40 25.570	0.17	4	69.553	-47 51 03.28	0.32	4	69.553				914
7431	-12	2100	8.5	A0	40 31.064	0.05	3	71.735	-12 32 55.14	0.33	2	71.555				7908
7432	-46	3362	8.4	G5	40 37.550	0.11	4	69.604	-46 32 19.43	0.33	4	69.604				915
7433	-56	1405	9.3	G5	40 41.886	0.14	4	69.128	-56 44 31.96	0.33	4	69.128				7909
7434	-21	2091	6.93	K0	40 46.713	0.14	4	68.570	-21 52 26.34	0.06	4	68.570	10387			7910
7435	-32	4320	8.5	K0	7 40 52.214	0.04	4	69.598	-33 05 49.80	0.21	4	69.598				7911
7436	+3	1773	7.4	F8	40 53.594	0.10	2	71.494	+3 36 23.59	0.29	2	71.494	10388			7912
7437	-48	3135	9.0	K0	40 57.991	0.07	4	70.044	-48 34 45.36	0.13	4	70.044				916
7438	-27	4446	6.92	A3	41 00.910	0.16	4	68.974	-27 32 55.31	0.19	4	68.974	10390			7913
7439	-1	1816	8.2	K2	41 04.275	0.08	2	70.658	-1 13 40.69	0.11	2	70.658				7914
7440	-5	2223	8.8	K5	7 41 12.202	0.02	2	70.527	-5 11 22.32	0.22	2	70.527				7915
7441	-9	2191	8.1	K2	41 12.245	0.26	2	71.581	-10 01 16.98	0.03	2	71.581				7916
7442	-58	967	6.44	B8	41 15.247	0.07	6	69.893	-58 30 41.33	0.08	6	69.893	2600	10397	1747	32600
7443	-6	2260	8.2	K0	41 25.655	0.03	2	69.676	-6 09 18.29	0.25	2	69.676				7917
7444f	+24	1759	3.70	G5	41 25.808	0.08	3	72.045	+24 31 08.90	0.03	3	72.045	294	10403	1749	30294

7378 Procyon A 6251, 13.0m;
Btr.-c.g. = +0.058, +0.01 (FK4).

7384 A 6260AB, 9.1m-9.6m, 0.1, 344°.
7444 A 6321, 8.5m, 7.0, 237°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
7445	-25	4966	6.66	A3	7 41 34.025	0.08	4	69.006	-25 22 59.80	0.18	4	69.006		10413		7918
7446	-37	3816	8.2	G5	41 44.174	0.12	4	69.594	-38 01 01.59	0.16	4	69.594				7919
7447	-28	4774	4.10	A2p	41 47.967	0.10	6	69.932	-28 50 02.85	0.20	6	69.932	2601	10417		32601
7448	-35	3813	8.9	K2	41 48.257	0.04	4	69.662	-35 30 32.12	0.07	4	69.662				7920
7449	-4	2069	7.9	G0	41 51.330	0.01	2	70.655	-4 56 07.54	0.01	2	70.655			10418	7921
7450	-60	881	9.56	K5	7 41 52.311	0.21	4	71.032	-60 10 59.36	0.19	4	71.032		10419		7922
7451	-63	782	8.3	K5	41 54.153	0.02	4	70.051	-63 21 55.47	0.20	4	70.051				7923
7452	-41	3318	7.1	K5	41 58.418	0.09	4	70.059	-41 20 48.93	0.10	4	70.059				917
7453	-35	3817	7.64	K2	41 58.743	0.07	4	70.029	-36 05 51.67	0.20	3	69.733		10424		7924
7454	-40	3377	5.11	K0	41 59.951	0.13	7	71.785	-40 48 42.00	0.09	6	71.735	2603	10425	1756	32603
7455	-45	3411	7.5	K5	7 42 01.878	0.07	4	70.516	-45 44 36.35	0.18	4	70.516				918
7456	-61	874	8.96	G5	42 04.618	0.04	2	69.555	-61 46 47.45	0.17	2	69.555		10428		7925
7457	-31	4984	7.8	G5	42 07.939	0.13	4	69.077	-31 12 41.23	0.10	4	69.077				7926
7458	-66	735	8.5	M	42 09.111	0.11	4	70.577	-66 45 41.79	0.07	4	70.577				19113
7459	-23	6064	8.07	K	42 11.280	0.06	4	69.133	-23 46 07.09	0.19	4	69.133		10434		7927
7460	+28	1463	1.21	K0	7 42 14.644	--	1	68.101	+28 08 54.26	--	1	68.101	295	10438	1758	30295
7461	-32	4344	8.2	G5	42 15.702	0.09	4	70.529	-32 20 29.47	0.08	4	70.529				7928
7462	-15	2010	8.5	K5	42 18.713	0.13	2	70.584	-15 51 07.55	0.03	2	70.584				7929
7463	-8	2049	8.5	K5	42 20.941	0.07	2	70.629	-8 16 15.14	0.08	2	70.629				7930
7464	-36	3841	8.6	K5	42 22.541	0.10	5	70.914	-37 02 38.77	0.11	4	71.117				7931
7465	-72	627	3.89	K0	7 42 27.092	0.02	124	71.330	-72 29 10.30	0.03	118	71.326	297	10444	1759	30297
7465	SP				42 27.066	0.06	54	70.987	-72 29 10.35	0.14	53	70.941	297	10444	1759	50297
7466	-24	5885	5.53	B3	42 27.977	0.15	6	70.442	-24 33 09.50	0.09	6	70.442		10445		21008
7467	-17	2130	8.2	K0	42 28.518	0.18	3	71.514	-17 34 18.60	0.27	3	71.514				7932
7468	-77	326	8.2	G5	42 29.574	0.08	4	70.520	-77 50 07.32	0.07	4	70.520				19114
7468	SP				7 42 29.541	0.42	4	70.107	-77 50 07.49	0.29	4	70.107				19114
7469	-14	2190	8.2	F2	42 30.355	0.05	2	72.015	-14 57 49.03	0.32	2	72.015				7933
7470	-51	2654	8.3	K0	42 32.107	0.11	6	70.894	-52 05 05.42	0.28	6	70.894				7934
7471	-13	2204	8.0	A0	42 36.874	0.04	2	72.542	-13 34 22.92	0.16	2	72.542			1760	7935
7472	-55	1321	8.3	K5	42 39.859	0.06	5	70.612	-55 25 41.32	0.11	4	70.233				7936
7473	-11	2088	8.2	B8	7 42 41.919	0.02	2	72.041	-11 38 32.33	0.31	2	72.041				7937
7474	-40	3399	7.9	K0	42 44.415	0.11	4	70.011	-40 25 43.88	0.12	4	70.011				919
7475	-10	2201	8.6	K5	42 55.102	0.11	2	71.708	-10 44 44.66	0.14	2	71.708				7938
7476	-51	2656	8.2	G5	42 58.471	0.38	4	70.684	-51 39 48.81	0.23	4	70.684				920
7477	-42	3485	8.8	K7	42 59.935	0.07	4	70.052	-42 36 17.52	0.16	4	70.052				921
7478	-13	2207	8.6	A2	7 43 03.583	0.17	2	71.681	-14 12 56.53	0.38	2	71.681				7939
7479	-52	1269	8.9	K0	43 03.867	0.22	4	70.854	-53 01 37.54	0.07	4	70.854				7940
7480	+18	1733	5.02	K2	43 13.712	0.05	12	72.418	+18 37 59.51	0.11	12	72.418	1200	10456	1762	31200
7481	-5	2237	7.02	A0	43 15.013	0.13	2	71.506	-5 33 21.45	0.01	2	71.506		10457		7941
7482	-71	612	7.34	K5	43 17.962	0.14	5	71.420	-71 25 15.84	0.06	5	71.420		10459		20495
7483	-58	980	8.4	K0	7 43 18.838	0.10	4	70.596	-58 20 39.77	0.09	4	70.596				7942
7484	-57	1311	8.9	G4	43 21.099	0.10	5	71.110	-57 49 26.47	0.30	5	71.110				7943
7485	-39	3562	7.41	K2	43 24.662	0.15	4	69.962	-39 43 35.40	0.17	4	69.962		10461		7944
7486	+2	1773	8.6	K0	43 25.409	0.04	2	71.562	+2 10 52.89	0.52	2	71.562				7945
7487	-64	746	9.1	K	43 26.639	0.10	4	70.160	-64 30 08.24	0.14	4	70.160				19115
7488	-34	3870	9.2	F8	7 43 27.743	0.10	4	70.535	-34 14 01.87	0.10	4	70.535				7946
7489	-37	3863	3.72	K5	43 28.286	0.11	7	71.819	-37 50 46.20	0.04	6	71.914	2605	10462	1765	32605
7490	-9	2210	9.1	F8	43 29.357	0.12	5	71.791	-9 42 19.20	0.16	4	71.931				26385
7491	+11	1670	5.30	A0	43 31.050	0.10	7	71.351	+10 53 29.29	0.19	7	71.351	1201	10463	1766	31201
7492	-54	1369	7.6	K5	43 31.310	0.12	4	70.139	-54 31 04.75	0.14	4	70.139				7947
7493	+4	1813	8.4	G5	7 43 31.718	0.26	2	71.588	+3 48 37.71	0.19	2	71.588				7948
7494	-14	2199	5.11	F0	43 38.664	0.03	67	71.714	-14 26 27.44	0.04	61	71.696	1202	10469	1767	31202
7495	-59	892	8.6	K0	43 42.683	0.10	4	69.555	-59 23 00.91	0.21	4	69.555				7949
7496	-22	2013	8.5	K2	43 43.814	0.08	4	68.595	-22 54 01.57	0.15	4	68.595				7950
7497	-18	2008	8.1	K2	43 43.884	0.01	2	70.689	-18 46 53.85	0.26	2	70.689				7951
7498	-40	3429	7.9	K0	7 43 46.044	0.07	4	69.694	-40 36 58.37	0.11	4	69.694				922
7499	-66	737	7.67	M0	43 49.536	0.15	5	71.209	-67 04 48.95	0.35	5	71.209		10477		19116
7500	-26	4929	8.4	K2	43 53.413	0.08	4	69.053	-26 51 30.90	0.11	4	69.053				7952
7501	-20	2172	8.5	K0	43 55.510	0.06	3	69.364	-20 38 10.92	0.16	4	69.338				7953
7502	-45	3435	8.9	K0	44 01.814	0.06	4	70.038	-45 40 44.91	0.11	4	70.038				923
7503	-62	878	7.96	K2	7 44 05.688	0.15	4	70.040	-62 19 47.04	0.07	4	70.040		10481		7954
7504	-51	2675	8.6	G5	44 10.407	0.06	4	70.071	-51 14 46.22	0.13	4	70.071				924
7505	-48	3176	7.7	K2	44 16.489	0.06	4	70.059	-48 13 55.45	0.09	3	69.774				925
7506	-4	2085	9.0	K0	44 22.102	0.02	2	70.637	-4 52 03.16	0.31	2	70.637				7955
7507	-3	2062	8.7	A0	44 26.343	0.14	3	71.106	-3 33 22.37	0.05	2	71.611				7956
7508	+0	2079	8.3	B9	7 44 28.629	0.12	4	71.906	+0 08 32.55	0.10	3	71.832		10488		7957
7509	-12	2136	8.7	G5	44 34.683	0.40	3	71.442	-13 13 39.26	0.16	3	71.442				7958
7510	+2	1780	8.2	A5	44 34.967	0.10	2	70.551	+2 35 20.87	0.22	2	70.551				7959
7511	+1	1905	7.62	G5	44 35.121	0.09	2	70.554	+1 02 34.10	0.12	2	70.554			1772	7960
7512*	-58	986	8.14	K5	44 36.877	0.09	4	69.014	-58 49 54.35	0.07	4	69.014		10492		7961
7513	-49	3053	8.0	G5	7 44 38.107	0.14	5	70.450	-49 24 29.63	0.11	4	70.538				926
7514	-44	3723	7.84	K2	44 48.309	0.08	5	70.485	-44 57 49.65	0.09	5	70.485		10494		927
7515	-25	5049	8.4	F8	44 51.714	0.17	4	68.945	-25 14 45.89	0.19	4	68.945				7962
7516	-56	1426	7.8	K2	45 01.282	0.10	4	69.498	-57 06 53.45	0.13	4	69.498				7963
7517	-15	2049	6.71	K0	45 21.871	0.25	2	70.529	-15 51 57.31	0.22	2	70.529		10507		7964

7512 SDS, 8.2m-11.5m, 1°6, 68°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
7518	-35	3873	8.9	A0	7 45 23.597	0.06	4	70.041	-35 15 22.21	0.23	4	70.041				7965
7519	+5	1790	6.95	K0	45 23.963	0.10	6	69.943	+5 32 06.09	0.12	6	69.943	2606	10509	1776	32606
7520	-29	4952	8.0	G0	45 29.088	0.08	4	69.557	-29 34 06.70	0.13	4	69.557				7966
7521	-37	3909	9.0	K0	45 37.053	0.12	4	70.131	-37 11 32.51	0.06	4	70.131				7967
7522	-5	2255	8.5	K0	45 37.342	0.25	2	69.673	-5 46 25.82	0.05	2	69.673				7968
7523	-46	3435	5.26	B2	7 46 00.786	0.02	112	71.103	-46 29 00.70	0.03	109	71.086	1203	10533	1777	31203
7524	-0	1828	8.6	K0	46 03.907	0.02	2	70.677	-0 37 07.71	0.08	2	70.677				7969
7525	-11	2111	8.2	K5	46 09.677	0.10	2	71.988	-12 05 34.25	0.27	2	71.988	10537			7970
7526	-46	3439	9.1	K2	46 16.151	0.19	4	70.350	-46 23 52.31	0.17	4	70.350				928
7527	-39	3622	8.5	K0	46 20.713	0.17	5	70.921	-39 26 15.19	0.08	4	71.126				7971
7528	-16	2136	8.8	A0	7 46 20.835	0.07	3	71.308	-16 25 05.18	0.08	3	71.308				7972
7529	-10	2233	10.5v	A2	46 20.981	0.15	3	70.686	-10 19 08.51	0.16	3	70.686				26392
7530	-21	2130	7.7	K0	46 25.867	0.11	4	69.631	-21 53 00.11	0.11	4	69.631				7973
7531	-43	3588	7.6	K5	46 27.973	0.08	4	70.586	-43 52 35.68	0.10	4	70.586				929
7532	-18	2029	7.5	K2	46 30.864	0.10	2	70.693	-19 02 55.89	0.17	2	70.693			1781	7974
7533	-36	3917	8.8	K2	7 46 38.916	0.05	4	70.098	-36 38 27.58	0.20	4	70.098				7975
7534	-1	1842	8.6	K5	46 42.787	0.02	2	72.067	-1 33 11.21	0.16	2	72.067				7976
7535	-4	2097	7.9	K0	46 43.040	0.31	3	71.449	-4 31 57.02	0.19	3	71.449				7977
7536	-71	618	7.68	F2	46 44.659	0.04	4	69.083	-71 35 45.81	0.18	4	69.083	10547			19117
7537	-82	216	7.88	K0	46 45.123	0.22	4	69.550	-82 13 09.07	0.15	4	69.550	10549			19118
7537 SP					7 46 45.098	0.17	4	70.726	-82 13 08.58	0.19	3	69.827	10549			19118
7538	-30	5131	8.9	G5	46 59.682	0.14	4	70.086	-30 26 58.78	0.21	4	70.086				7978
7539	-24	6023	8.5	K2	46 59.854	0.08	4	70.630	-24 23 42.01	0.09	4	70.630				7979
7540	-47	3331	7.9	G5	47 04.407	0.10	4	70.616	-47 54 33.79	0.04	4	70.616				930
7541	-28	4906	8.5	G5	47 06.451	0.06	3	70.516	-28 35 42.19	0.08	4	70.202				7980
7542	-14	2229	7.9	K2	7 47 11.361	0.16	3	71.216	-15 13 07.78	--	1	69.271				7981
7543	-24	6030	3.47	G0p	47 11.409	0.02	97	71.139	-24 43 59.19	0.03	91	71.106	1204	10562	1786	81204
7544	-9	2239	8.5	K2	47 15.011	0.08	2	71.642	-9 49 07.94	0.11	2	71.642				7982
7545	-35	3915	8.6	K5	47 17.957	0.11	5	70.873	-36 00 27.65	0.15	4	70.557				7983
7546	-7	2205	8.6	F8	47 18.450	0.12	3	72.468	-8 10 53.55	0.39	3	72.468				7984
7547	-13	2247	6.64	K5	7 47 21.095	0.10	2	72.084	-13 57 30.32	0.18	2	72.084				7985
7548	-20	2211	7.8	B8	47 21.779	0.15	4	70.585	-21 09 29.40	0.29	4	70.585			1788	7986
7549	-42	3559	9.1	G5	47 21.977	0.14	4	70.589	-42 24 01.14	0.13	4	70.589				931
7550	-69	778	9.1	K0	47 25.255	0.15	4	69.020	-69 34 34.65	0.38	4	69.020				19119
7551	-16	2146	5.54	K0	47 25.716	0.09	5	71.835	-17 06 01.85	0.17	4	71.770	2607	10569	1789	7987
7552	-19	2085	6.48	G0	7 47 33.402	0.10	4	70.593	-20 04 46.20	0.09	4	70.593				7988
7553	-38	3690	9.0	F0	47 37.206	0.06	4	69.994	-38 19 40.62	0.12	4	69.994				7989
7554	-2	2307	8.2	K0	47 40.056	0.36	2	70.488	-2 33 52.74	0.05	2	70.488				7990
7555	-32	4451	5.70	K5	47 40.678	0.10	6	69.600	-33 09 42.87	0.09	6	69.600	2608	10574		32608
7556	-77	330	9.0	A2	47 47.455	0.08	4	70.003	-78 02 31.54	0.13	4	70.003				19120
7556 SP					7 47 47.494	0.08	4	70.048	-78 02 31.31	0.27	4	70.048				19120
7557	-3	2087	7.05	A3	48 00.605	0.04	2	70.658	-3 28 11.82	0.09	2	70.658				7991
7558	-30	5159	9.2	K2	48 07.681	0.10	4	70.188	-31 10 41.17	0.08	4	70.188				7992
7559	-34	3987	8.1	F5	48 07.891	0.08	4	70.081	-34 58 48.44	0.13	4	70.081				7993
7560	-6	2326	8.8	K5	48 10.720	0.13	2	70.732	-6 54 23.19	0.09	2	70.732				7994
7561	+4	1833	6.62	G5	7 48 12.688	0.12	2	70.971	+4 35 13.64	0.06	2	70.971				7995
7562	-4	2104	8.5	K0	48 18.780	0.04	2	72.040	-4 58 04.58	0.22	2	72.040				7996
7563	-2	2315	8.3	A0	48 21.465	0.25	2	72.016	-2 22 01.01	0.28	2	72.016				7997
7564	-59	908	5.82	F2	48 23.238	0.03	62	71.228	-60 09 27.38	0.03	60	71.216	1206	10601	1795	31206
7565	+1	1927	8.3	K0	48 28.686	0.16	2	71.548	+0 48 10.22	0.17	2	71.548				7998
7566	-10	2253	6.32	K0	7 48 33.095	0.11	7	71.048	-11 00 00.46	0.16	6	71.014	2609	10606	1796	32609
7567	-50	3001	8.2	K2	48 34.232	0.16	4	70.535	-50 41 25.32	0.17	4	70.535				932
7568	-10	2257	8.1	K0	48 55.654	0.16	2	72.022	-11 02 36.01	0.33	2	72.022				7999
7569	-65	826	8.8	K0	49 01.294	0.10	4	70.602	-65 41 48.19	0.13	4	70.602				19121
7570	-22	2052	8.4	G0	49 05.087	0.04	4	70.037	-22 54 14.50	0.09	4	70.037				8000
7571	-6	2334	7.2	A2	7 49 05.176	0.09	2	71.704	-6 51 15.46	0.38	2	71.704				8001
7572	+2	1808	5.11	B8	49 06.380	0.03	22	71.983	+1 53 44.96	0.11	21	71.931	1205	10622	1797	31205
7573	-86	123	8.5	K2	49 13.268	0.12	4	70.441	-86 39 10.22	0.19	4	70.441				19122
7573 SP					49 13.476	0.09	4	69.689	-86 39 10.42	0.12	4	69.689				19122
7574	-60	898	8.0	K2	49 16.475	0.06	5	70.450	-61 05 40.80	0.29	5	70.450				8002
7575	-33	4224	9.1	K0	7 49 20.015	0.08	4	69.988	-33 37 17.20	0.09	4	69.988				8003
7576	-12	2179	6.46	F2	49 20.537	0.12	2	72.043	-12 41 24.94	0.05	2	72.043				8004
7577	-65	827	5.94	B9	49 21.370	0.09	6	71.381	-66 04 04.44	0.11	6	71.381	2610	10628	1798	32610
7578	-55	1364	8.4	K0	49 24.121	0.02	4	70.149	-55 30 47.77	0.09	4	70.149				8005
7579	+3	1824	6.59	M0	49 29.903	0.05	2	72.048	+3 24 26.47	0.21	2	72.048				8006
7580	-17	2189	8.8	G5	7 49 33.522	--	1	72.221	-18 09 37.94	--	1	72.221				8007
7581	-32	4488	7.8	K2	49 37.363	0.05	3	71.030	-32 35 12.81	0.20	3	71.030				8008
7582	-20	2236	6.88	F5	49 37.624	0.13	4	70.048	-20 35 28.04	0.11	4	70.048				8009
7583	-45	3505	9.0	K0	49 41.026	0.10	4	70.100	-45 34 42.55	0.10	4	70.100				933
7584	-48	3251	9.3	K0	49 44.086	0.14	3	70.421	-48 29 06.47	0.35	3	70.421				934
7585	-26	5107	8.4	K5	7 49 44.638	0.20	4	69.609	-26 46 01.09	0.21	4	69.609				8010
7586	+4	1843	8.2	B8	49 44.875	0.20	2	72.037	+3 58 22.27	0.06	2	72.037				8011
7587	-58	1011	9.1	K0	50 04.527	0.22	4	70.187	-59 03 05.71	0.26	4	70.187				8012
7588	+1	1932	9.0	F2	50 11.767	0.31	4	72.430	+1 43 39.12	0.23	4	72.430				26398
7589	-62	902	8.37	K0	50 17.943	0.10	4	69.677	-62 41 59.32	0.12	4	69.677	10648			8013

7529 10.5m to 12.2m.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
7590	- 5°	2280	5.75	F2	7 50 19.689	0.10	6	71.247	- 5 17 52.07	0.13	6	71.247	2611	10649		32611
7591	-41	3480	7.4	K2	50 19.922	0.08	4	70.124	-41 39 25.43	0.12	4	70.124				935
7592	-19	2106	8.8	B8	50 26.274	0.13	2	69.774	-19 39 25.78	0.01	2	69.774				8014
7593	+27	1499	4.99	A2	50 26.287	0.13	8	71.554	+26 53 47.96	0.22	7	71.478	1207	10653	1801	31207
7594	-76	477	8.5	A2	50 27.696	0.15	4	70.484	-76 38 41.83	0.06	4	70.484				19123
7594 SP					7 50 27.395	0.35	4	70.526	-76 38 41.16	0.42	4	70.526				19123
7595	- 0	1849	8.8	K0	50 29.118	0.22	2	72.268	- 0 57 01.92	0.25	2	72.268				8015
7596	-40	3579	3.76	G5	50 29.807	0.06	10	70.886	-40 26 44.94	0.11	9	70.883	301	10655	1802	30301
7597*	+ 8	1904	8.6	G5	50 30.125	0.27	4	72.453	+ 8 18 46.90	0.14	4	72.453				26399
7598	-54	1416	8.7	K0	50 34.826	0.07	4	70.253	-54 41 23.35	0.15	4	70.253				8016
7599	-21	2159	7.0	K2	7 50 35.298	0.12	4	69.568	-22 05 37.54	0.07	4	69.568				8017
7600	+ 2	1814	8.8	G5	50 39.608	0.01	2	70.691	+ 2 06 17.06	0.04	2	70.691				8018
7601	-74	472	9.0	G0	50 39.817	0.13	4	69.601	-74 30 31.78	0.30	4	69.601				19124
7602	-13	2277	7.8	K0	50 41.067	0.08	2	70.595	-13 55 38.07	0.07	2	70.595				8019
7603	-55	1372	7.35	K0	50 41.266	0.06	5	70.502	-55 34 21.62	0.10	5	70.502		10658		8020
7604	-70	693	9.0	F5	7 50 52.361	0.14	5	70.994	-70 22 09.59	0.12	4	70.710				19125
7605	-37	4003	8.4	G5	50 53.882	0.20	4	70.063	-37 50 55.65	0.25	4	70.063				8021
7606	-36	3981	7.9	K0	50 59.538	0.24	4	71.068	-36 46 54.37	0.14	4	71.068				8022
7607	-44	3815	8.9	G5	51 00.725	0.20	5	71.277	-44 14 17.66	0.17	5	71.277				936
7608	- 9	2270	9.2	A2	51 02.630	0.08	5	71.842	- 9 49 33.17	0.37	3	71.341				26401
7609	-51	2737	9.2	F8	7 51 02.789	0.10	4	69.557	-51 41 02.61	0.08	4	69.557				937
7610	-39	3724	8.9	K0	51 04.227	0.10	5	71.391	-39 13 24.40	0.29	5	71.391				8023
7611	+ 0	2119	8.1	K0	51 17.611	0.14	2	71.592	+ 0 27 46.31	0.20	2	71.592		10672		8024
7612	- 5	2284	7.8	A0	51 21.337	0.23	2	70.581	- 5 55 39.58	0.19	2	70.581				8025
7613	-16	2180	8.6	K0	51 25.067	0.10	3	71.019	-16 43 19.47	0.28	3	71.019				8026
7614	-43	3690	9.0	K5	7 51 26.584	0.08	4	70.157	-43 50 58.13	0.10	4	70.157				938
7615	-50	3024	9.5	K0	51 30.616	0.28	4	70.100	-50 42 36.33	0.26	4	70.100				939
7616	-29	5092	8.5	G5	51 33.172	0.15	4	69.024	-29 36 10.75	0.14	4	69.024				8027
7617	-81	237	6.93	A2	51 35.659	0.11	7	70.136	-81 28 07.24	0.08	6	69.811	3978	10684	1807	33978
7617 SP					51 35.739	0.07	6	70.574	-81 28 07.02	0.27	6	70.574	3978	10684	1807	53978
7618	-27	4695	8.3	K7	7 51 41.512	0.13	4	69.572	-27 50 59.11	0.07	4	69.572				8028
7619	- 3	2112	7.8	A3	51 42.468	0.04	3	71.048	- 3 24 48.42	0.14	2	71.524				8029
7620	-20	2260	8.8	K5	51 46.524	0.05	4	69.476	-20 54 02.39	0.08	4	69.476				8030
7621	-49	3141	8.2	G5	51 47.546	0.09	4	70.059	-49 38 25.37	0.14	4	70.059				940
7622	-52	1319	7.7	K0	51 49.001	0.09	4	69.654	-52 32 37.29	0.27	4	69.654				8031
7623	-17	2219	7.12	K5	7 51 52.891	0.26	2	70.602	-18 11 57.17	0.21	2	70.602		10690		8032
7624	- 4	2135	8.8	A2	51 55.647	0.18	2	70.658	- 4 23 47.25	0.12	2	70.658				8033
7625	-40	3603	8.3	K0	51 55.978	0.14	4	70.015	-40 39 21.30	0.14	4	70.015				941
7626	+ 1	1939	8.5	A3	51 59.140	0.05	2	70.681	+ 1 42 08.73	0.26	2	70.681				8034
7627	- 9	2275	8.5	G5	51 59.993	0.01	2	70.648	- 9 39 13.11	0.01	2	70.648				8035
7628	- 1	1883	7.5	G5	7 52 02.285	0.17	2	71.531	- 1 16 46.88	0.02	2	71.531		10694		8036
7629	- 7	2248	8.8	K0	52 09.700	0.09	3	71.741	- 7 13 00.95	0.06	3	71.741				8037
7630	-12	2206	8.6	K2	52 19.080	0.20	2	71.524	-12 32 54.20	0.18	2	71.524				8038
7631	-64	769	8.50	G5	52 26.118	0.13	4	69.541	-64 53 59.38	0.26	4	69.541		10702		19126
7632	- 1	1887	8.8	A0	52 33.858	0.24	2	69.673	- 2 07 12.65	0.23	2	69.673				8039
7633	-85	137	8.51	A2	7 52 36.874	0.16	5	70.271	-85 47 27.90	0.25	5	70.271		10704		19127
7633 SP					52 36.845	0.23	4	69.948	-85 47 27.21	0.15	4	69.948		10704		19127
7634	-31	5218	8.65	G5	52 38.803	0.07	4	69.561	-31 29 48.20	0.12	4	69.561		10705		8040
7635	-42	3661	8.4	K0	52 40.001	0.13	4	69.528	-42 56 39.97	0.13	4	69.528				942
7636	-23	6463	7.96	K0	52 40.965	2.26	6	70.547	-24 10 21.93	0.24	6	70.547		10706		8041
7637	- 4	2141	8.0	A2	7 52 41.299	0.24	2	70.479	- 4 26 19.25	0.26	2	70.479				8042
7638	+20	1946	5.36	A0	52 44.875	0.08	6	68.581	+20 01 02.20	0.12	6	68.581	2614	10707	1808	32614
7639	-60	918	8.9	K0	52 55.180	0.08	4	69.143	-60 26 26.00	0.12	4	69.143				8043
7640*	-63	832	9.1	F8	52 58.537	0.06	4	69.053	-63 38 16.65	0.12	4	69.053				8044
7641f	-30	5272	8.5	G5	53 04.086	0.08	3	69.133	-30 57 58.35	0.28	4	69.165				8045
7642	-34	4096	9.0	F0	7 53 07.022	0.08	4	69.540	-35 11 33.29	0.07	4	69.540				8046
7643	-10	2294	8.2	F5	53 09.365	0.22	2	70.574	-10 31 44.18	0.15	2	70.574				8047
7644	- 2	2350	8.5	K0	53 11.684	0.01	2	70.591	- 2 09 40.04	0.10	2	70.591				8048
7645	-25	5268	7.6	K2	53 13.091	0.18	4	69.054	-25 47 56.31	0.21	4	69.054				8049
7646	-79	256	8.7	G0	53 20.821	0.18	4	70.080	-80 02 20.37	0.11	4	70.080				19128
7646 SP					7 53 20.649	0.20	4	70.524	-80 02 20.11	0.48	4	70.524				19128
7647	-13	2304	7.7	F2	53 21.839	0.13	2	70.660	-13 35 56.99	0.21	2	70.660			1815	8050
7648	- 6	2367	8.3	K0	53 27.055	0.11	2	70.517	- 6 23 35.19	0.14	2	70.517				8051
7649	-80	229	9.04	K5	53 32.643	0.17	5	70.012	-81 04 28.61	0.19	5	70.012		10730		19129
7649 SP					53 32.631	0.14	4	70.769	-81 04 28.20	0.26	4	70.769		10730		19129
7650	-67	839	8.7	G0	7 53 37.286	0.13	4	69.472	-67 52 37.90	0.18	4	69.472				19130
7651	-58	1019	8.4	G0	53 39.953	0.06	4	69.114	-58 35 57.32	0.21	4	69.114				8052
7652	+ 4	1859	8.1	A3	53 44.652	0.10	3	71.082	+ 4 23 16.95	0.06	2	71.574				8053
7653	+ 0	2133	8.6	K2	53 50.013	0.15	2	70.598	+ 0 40 18.41	0.04	2	70.598				8054
7654	-46	3572	7.34	K5	53 53.701	0.16	4	69.558	-47 10 46.48	0.11	4	69.558		10737		943
7655	-46	3570	8.0	K0	7 53 54.004	0.09	4	69.961	-46 31 56.61	0.04	4	69.961				944
7656	- 0	1859	8.8	K0	53 54.264	0.00	2	71.587	- 0 53 25.76	0.02	2	71.587				8055
7657	+ 2	1827	8.2	A0	53 54.970	0.28	2	70.615	+ 2 27 21.91	0.15	2	70.615				8056
7658	- 7	2264	8.4	A2	53 56.146	0.07	2	70.614	- 7 51 25.56	0.02	2	70.614				8057
7659	+16	1590	5.96	K0	54 09.146	0.03	31	70.856	+15 55 30.41	0.06	31	70.856	1208	10742	1817	31208

7597 A 6431, 9.2m-10.4m, 0°3, 48°.
7640 9.8m-9.8m, 0°2, 206°.

7641 11.5m, 3°3, 240°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
7660	-33	4320	8.8	K2	7 54 09.272	0.12	4	70.047	-34 01' 20.78	0.21	4	70.047				8058
7661	-20	2284	6.76	A0	54 09.768	0.09	4	68.520	-20 19 44.22	0.06	4	68.520		10743		8059
7662	-53	1480	7.94	K0	54 09.912	0.09	4	69.550	-53 29 21.74	0.10	4	69.550		10744		8060
7663	+17	1711	9.0	F5	54 11.529	0.10	5	70.619	+17 07 09.52	0.13	4	70.544				26412
7664	-15	2143	8.0	K2	54 14.537	0.12	2	71.513	-15 23 24.20	0.14	2	71.513				8061
7665	-34	4114	9.0	K0	7 54 16.657	0.13	4	70.087	-34 34 35.33	0.13	4	70.087				8062
7666	-32	4601	9.0	K0	54 35.729	0.11	4	70.159	-32 59 22.28	0.12	4	70.159				8063
7667	-22	2087	4.35	F8	54 42.447	0.12	6	70.263	-22 44 43.51	0.04	6	70.263	2615	10756	1819	32615
7668	+2	1831	8.5	G5	54 42.682	0.19	2	70.682	+2 40 44.22	0.09	2	70.682				8064
7669	-68	693	8.8	K5	54 45.112	0.08	4	70.079	-69 00 24.83	0.09	4	70.079				19131
7670	-41	3560	8.9	G5	7 54 47.067	0.20	3	70.086	-41 47 06.80	0.07	3	70.086				945
7671	-0	1864	8.4	A0	54 52.714	0.24	2	71.689	-0 30 02.89	0.09	2	71.689				8065
7672	-14	2293	7.9	G0	54 54.510	0.27	2	70.675	-14 27 27.77	0.03	2	70.675		10759		8066
7673	-70	697	9.2	M0	54 58.673	0.21	4	70.094	-71 10 11.47	0.09	4	70.094				19132
7674	-10	2304	8.6	K0	55 02.734	0.17	2	72.011	-10 38 07.60	0.01	2	72.011				8067
7675	+0	2142	8.1	A3	7 55 10.764	0.16	2	72.036	+0 25 57.42	0.59	2	72.036		10762		8068
7676	-6	2376	9.4v	*	55 11.930	0.06	4	72.522	-7 03 14.61	0.15	4	72.522				26415
7677	+4	1862	8.7	K0	55 13.992	0.09	2	72.085	+4 39 09.95	0.34	2	72.085				8069
7678	-24	6234	8.1	A0	55 17.792	0.05	4	69.505	-24 23 06.71	0.06	4	69.505				8070
7679	-38	3860	8.8	K0	55 22.826	0.09	5	70.876	-38 54 10.28	0.10	4	70.561				8071
7680	-18	2103	8.1	K0	7 55 24.779	0.15	2	71.088	-19 00 20.30	0.17	2	71.088				8072
7681	-52	1343	3.60	B3	55 30.346	0.02	106	71.254	-52 50 50.78	0.03	99	71.231	303	10770	1822	30303
7682	-29	5236	4.85	A2	55 40.437	0.04	45	70.614	-30 11 56.21	0.03	45	70.614	1210	10774	1824	31210
7683	-43	3766	5.10	B3	55 41.144	0.11	6	71.121	-43 58 27.53	0.26	5	70.927	2616	10775		32616
7684	-56	1472	8.3	G5	55 46.481	0.13	5	70.534	-56 20 52.71	0.10	5	70.534				8073
7685	-50	3064	9.1	K0	7 55 47.952	0.13	5	70.838	-50 56 57.82	0.17	5	70.838				946
7686	+3	1860	6.53	A3	55 53.540	0.11	2	70.671	+3 04 19.57	0.13	2	70.671		10779		8074
7687	-57	1354	7.35	K0	55 54.761	0.21	4	70.115	-57 17 43.16	0.05	4	70.115		10781		8075
7688	-34	4147	7.7	K0	55 55.767	0.18	5	70.984	-34 47 32.82	0.19	5	70.984				8076
7689	-25	5342	8.45	K0	55 57.706	0.10	3	70.381	-25 29 18.63	0.12	4	70.101		10783		8077
7690	-72	650	8.3	K2	7 55 58.576	0.09	4	69.612	-72 58 30.92	0.24	4	69.612				19133
7691	-3	2146	7.9	A0	56 00.235	0.43	2	71.775	-3 30 05.34	0.10	2	71.775		10784		8078
7692	-68	697	8.9	K2	56 00.572	0.09	4	69.188	-68 49 11.27	0.34	4	69.188				19134
7693	-22	2099	8.6	A2	56 06.627	0.15	4	71.047	-22 52 22.74	0.15	4	71.047				8079
7694	-9	2311	8.8	B9	56 16.639	0.14	3	71.716	-9 55 53.14	0.23	3	71.716				8080
7695	-24	6255	8.6	K2	7 56 19.445	0.08	3	70.802	-24 40 25.53	0.02	3	70.802				8081
7696	-21	2197	8.5	G5	56 23.374	0.20	3	70.431	-21 21 04.07	0.06	3	70.431				8082
7697	-43	3787	10.5	G5	56 25.726	0.05	4	70.067	-43 44 39.98	0.13	4	70.067				947
7698	-45	3616	8.6	K0	56 33.468	0.11	4	70.109	-45 37 49.38	0.12	3	69.839				948
7699	-16	2224	8.3	K5	56 38.933	0.12	2	72.101	-16 55 13.76	0.01	2	72.101				8083
7700	-36	4064	8.2	G5	7 56 42.222	0.00	4	70.141	-36 29 52.60	0.14	4	70.141				8084
7701	-8	2164	8.7	G0	56 42.607	0.10	2	71.113	-8 24 34.92	0.13	2	71.113				8085
7702	-11	2188	8.4	K5	56 45.568	0.02	2	72.089	-11 39 51.86	-	1	71.941				8086
7703	+3	1862	8.9	K5	56 49.701	0.11	2	70.699	+3 19 24.26	0.02	2	70.699				8087
7704	-27	4819	7.7	G5	56 50.374	0.06	4	70.777	-27 46 12.47	0.13	4	70.777				8088
7705	-28	5217	8.9	A0	7 56 51.249	0.08	4	71.000	-28 54 22.54	0.17	4	71.000				8089
7706	-66	778	8.7	K5	56 54.539	0.18	4	69.542	-66 37 56.63	0.13	4	69.542				19135
7707	-33	4374	8.2	K5	57 10.812	0.12	5	70.445	-33 46 30.99	0.22	4	70.532				8090
7708	-3	2157	5.06	K0	57 14.184	0.05	33	71.889	-3 32 31.18	0.04	30	71.923	304	10811	1833	30304
7709	-1	1916	8.0	K0	57 27.051	0.02	2	71.733	-1 39 35.08	0.40	2	71.733				8091
7710	-59	947	7.8	K0	7 57 27.490	0.03	4	69.650	-59 33 38.16	0.09	4	69.650				8092
7711f	-13	2337	8.1	A0	57 28.591	0.19	2	71.552	-13 42 44.00	0.05	2	71.552				8093
7712	-41	3611	9.3	K0	57 34.329	0.14	4	70.018	-41 44 08.82	0.07	4	70.018				949
7713	-20	2324	8.5	K5	57 36.718	0.14	4	71.124	-20 18 38.32	0.16	4	71.124				8094
7714	-18	2118	4.64	A2	57 37.540	0.02	119	71.026	-18 15 39.84	0.03	114	70.985	1212	10825	1835	81212
7715	-71	640	8.2	K5	7 57 43.863	0.14	4	70.106	-71 51 41.16	0.09	4	70.106				19136
7716	-30	5385	7.5	K0	57 49.338	0.08	4	70.792	-30 16 27.87	0.12	4	70.792				8095
7717	-54	1456	7.48	K0	57 52.346	0.11	3	69.440	-54 24 33.75	0.14	3	69.440		10840		8096
7718	-35	4085	9.2	K9	57 52.474	0.11	4	70.092	-35 17 13.01	0.18	4	70.092				8097
7719	+25	1812	5.88	K0	57 54.515	0.11	4	71.797	+25 31 52.59	0.07	3	71.686	1211	10844	1839	31211
7720	-51	2793	9.2	K0	7 57 54.872	0.17	5	70.145	-52 00 49.70	0.27	4	69.649				950
7721	+17	1731	5.79	K0	57 55.456	0.07	6	70.919	+17 26 49.82	0.09	6	70.919	2618	10845		32618
7722	-13	2338	8.5	K2	57 57.195	0.30	2	71.718	-13 42 03.66	0.27	2	71.718				8098
7723	-39	3868	8.9	K2	57 58.864	0.05	4	70.081	-39 50 45.18	0.07	4	70.081				8099
7724	-4	2166	7.08	F8	58 00.113	0.01	2	72.061	-4 44 29.76	0.21	2	72.061		10847		8100
7725	+11	1734	8.8	F8	7 58 02.516	0.10	4	72.377	+10 50 33.55	0.05	4	72.377				26421
7726	-52	1355	7.23	K0	58 04.305	0.07	4	69.997	-52 24 18.83	0.14	4	69.997		10852		8101
7727	-17	2274	8.2	K5	58 04.374	-	1	72.230	-17 51 58.12	-	1	72.230				8102
7728	-35	4091	8.3	B8	58 07.373	0.14	4	70.548	-35 21 40.53	0.17	4	70.548				8103
7729	-47	3490	7.9	G0	58 12.952	0.12	4	70.095	-48 08 29.04	0.14	4	70.095				951
7730	-46	3652	9.2	K0	7 58 13.027	0.07	4	70.658	-46 45 53.46	0.25	4	70.658				952
7731	-26	5341	8.0	K0	58 13.606	0.22	3	69.054	-26 27 11.80	0.08	4	69.106				8104
7732	-17	2276	8.3	K2	58 14.280	0.13	2	72.051	-17 47 29.81	0.22	2	72.051				8105
7733	-6	2404	8.6	K0	58 14.411	0.03	2	71.599	-6 57 07.29	0.14	2	71.599				8106
7734	-32	4688	8.5	M	58 19.270	0.13	4	70.541	-32 34 23.62	0.08	4	70.541				8107

7676 9.4m to 10.6m B5+F2.

7711 A 6509, 10.9m, 3rd, 280°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
7735	-37	4136	8.8	K5	58 28.565	0.11	4	70.602	-37 42 26.13	0.18	4	70.602				8108
7736	-40	3731	8.3	K2	58 31.397	0.09	5	70.996	-40 28 00.16	0.06	5	70.996				953
7737	-47	3498	9.4	G5	58 35.580	0.11	4	71.304	-47 57 47.37	0.07	3	71.433				954
7738	-6	2407	6.55	G5	58 36.252	0.05	2	71.073	-6 16 47.41	0.14	2	71.073		10866		8109
7739	-0	1882	4.88	K0	58 40.787	0.07	7	69.708	-1 15 10.31	0.09	6	69.506	2620	10870		32620
7740	-38	3931	9.0	--	58 46.634	0.09	3	71.062	-38 44 04.03	0.14	2	70.524				8110
7741	-42	3781	9.4	G5	58 58.074	0.11	4	70.136	-42 16 33.55	0.14	4	70.136				955
7742	-32	4703	8.3	K5	59 00.238	0.06	5	70.454	-32 13 21.22	0.12	4	70.543				8111
7743	-4	2176	8.7	F2	59 02.822	0.12	2	70.699	-4 37 33.82	0.07	2	70.699				8112
7744	-12	2280	8.6	A0	59 03.943	0.37	2	70.678	-12 39 13.68	0.36	2	7				8113
7745	+1	1971	8.8	A0	59 04.268	0.12	2	71.719	+1 36 59.30	0.22	2	7				8114
7746	-56	1487	8.8	K2	59 05.030	0.19	4	69.540	-56 47 32.49	0.25	4	69.540				8115
7747	-29	5351	8.4	K0	59 07.052	0.09	4	69.538	-29 44 18.28	0.09	4	69.538				8116
7748	-65	853	9.0	F8	59 07.058	0.20	4	69.061	-65 17 53.41	0.10	4	69.061				19137
7749	+9	1843	6.11	F5	59 07.849	0.08	9	71.876	+9 03 12.62	0.14	7	71.939	2621	10880	1843	32621
7750	+0	2162	8.8	K0	59 09.253	0.11	2	71.529	+0 06 15.08	0.20	2	71.529				8117
7751	-9	2332	8.9	F5	59 10.978	0.21	2	71.671	-9 44 58.75	0.16	2	71.671				8118
7752	-21	2221	8.1	G0	59 11.432	0.09	4	69.602	-22 11 36.84	0.06	4	69.602				8119
7753	-14	2331	8.1	K0	59 16.849	0.20	2	70.568	-15 06 56.50	0.21	2	70.568				8120
7754	-1	1926	8.7	K5	59 32.190	0.16	3	71.079	-2 08 33.12	0.19	2	71.570				8121
7755	-53	1505	5.89	B8	59 36.125	0.05	6	71.607	-54 00 43.23	0.15	6	71.607	2622	10889	1845	32622
7756	+2	1854	4.52	K0	59 39.828	0.09	6	70.746	+2 28 25.85	0.12	5	70.644	2623	10891		32623
7757	-83	203	8.39	A3	59 40.533	0.15	5	70.564	-83 35 11.22	0.12	4	70.680				19138
7757 SP					59 40.434	0.28	4	70.587	-83 35 11.04	0.17	4	70.587				19138
7758	-7	2321	8.7	K5	59 40.861	0.08	2	70.580	-7 26 32.91	0.09	2	70.580				8122
7759	-63	866	4.96	B3	59 42.288	0.12	6	71.674	-63 25 42.12	0.14	6	71.674	2624	10893	1846	32624
7760*	+1	1977	9.0	F5	59 56.103	0.14	4	70.860	+1 33 22.61	0.04	4	70.860				26426
7761	-5	2339	6.30	G0	59 58.553	0.03	75	71.595	-6 11 47.94	0.04	72	71.586	1213	10900	1847	31213
7762	-34	4235	8.2	K2	00 08.950	0.14	4	69.549	-35 00 39.34	0.17	4	69.549				8123
7763	-19	2205	7.8	A0	00 16.317	0.04	4	69.464	-20 10 39.30	0.08	4	69.464				8124
7764	-49	3282	9.4	K0	00 24.184	0.09	4	69.999	-49 50 34.25	0.13	4	69.999				956
7765	+28	1532	5.04	K0	00 26.952	0.03	82	71.317	+27 56 09.06	0.05	78	71.289	305	10912	1849	80305
7766	-24	6365	7.7	F2	00 28.713	0.16	4	69.563	-24 53 45.48	0.18	4	69.563				8125
7767	-2	2394	8.3	A0	00 30.151	0.15	2	70.587	-2 35 22.01	0.14	2	70.587				8126
7768	-79	257	7.67	K5	00 32.303	0.08	4	69.985	-79 29 39.77	0.12	4	69.985	10915			19139
7768 SP					00 32.340	0.20	4	70.474	-79 29 38.91	0.29	4	70.474	10915			19139
7769	-61	949	8.1	K0	00 32.405	0.12	4	69.058	-61 44 14.55	0.14	4	69.058				8127
7770	-6	2423	9.0	K0	00 39.305	0.06	4	70.967	-6 16 24.89	0.07	4	70.967				26429
7771	-44	3977	9.0	K0	00 41.962	0.10	4	69.583	-45 00 43.97	0.05	4	69.583				957
7772	+2	1859	8.5	G5	01 00.897	0.02	2	70.692	+1 54 36.11	0.33	2	70.692				8128
7773	-35	4138	7.7	G5	01 03.175	0.13	5	70.055	-36 04 43.00	0.13	4	70.044				8129
7774	-31	5437	8.9	K0	01 03.588	0.13	3	68.957	-31 41 51.47	0.09	4	69.033				8130
7775	-7	2329	7.35	F8	01 06.590	0.08	2	71.596	-8 01 55.67	0.17	2	71.596	10937			8131
7776	-26	5441	8.08	G5	01 11.036	0.09	4	69.112	-27 07 46.33	0.10	4	69.112	10940			8132
7777	-63	873	9.0	G5	01 22.019	0.14	4	69.032	-63 22 06.33	0.14	4	69.032				8133
7778	-55	1429	8.6	K0	01 22.956	0.13	4	69.576	-56 09 44.42	0.13	4	69.576				8134
7779	-59	964	8.2	G5	01 25.303	0.11	4	69.104	-59 45 29.69	0.09	4	69.104				8135
7780	+4	1890	8.6	F8	01 25.426	0.17	3	71.506	+4 10 04.20	0.20	2	72.210				8136
7781	-54	1484	8.4	K0	01 25.936	0.08	4	70.050	-55 06 43.99	0.17	4	70.050				8137
7782	-28	5372	8.3	A2	01 30.757	0.09	4	69.530	-28 14 28.50	0.13	4	69.530				8138
7783	-38	3998	7.7	K5	01 35.008	0.08	4	69.590	-38 29 48.28	0.10	4	69.590				8139
7784	-3	2195	9.0	K0	01 35.615	0.13	3	71.272	-3 46 30.03	0.14	2	71.278				8140
7785	-36	4148	9.4	F0	01 36.737	0.08	4	70.072	-37 00 01.09	0.12	4	70.072				8141
7786	-15	2232	8.5	K0	01 40.593	0.07	2	71.503	-16 12 00.32	0.12	2	71.503				8142
7787	-4	2197	7.5	B5	01 41.162	0.10	2	71.498	-4 41 05.15	0.08	2	71.498				8143
7788	-10	2362	7.8	K0	01 45.389	0.02	2	69.699	-10 17 10.74	0.31	2	69.699				8144
7789	-39	3939	2.27	O3	01 49.473	0.03	90	71.504	-39 51 40.58	0.04	85	71.481	306	10947	1854	30306
7790	-75	479	9.1	K0	01 55.671	0.10	4	69.528	-76 04 24.14	0.10	4	69.528				19140
7790 SP					01 55.706	0.12	4	70.033	-76 04 23.73	0.30	4	70.033				19140
7791	-69	821	8.60	K2	01 55.830	0.08	4	70.270	-69 53 10.54	0.28	4	70.270	10951			19141
7792	-53	1518	8.6	G5	01 56.157	0.11	4	69.022	-53 52 18.57	0.21	4	69.022				8145
7793	-87	129	9.5	K0	02 10.008	0.20	4	69.669	-87 46 37.21	0.07	4	69.669				19143
7793 SP					02 10.027	0.19	4	69.561	-87 46 37.02	0.13	4	69.561				19143
7794	+4	1896	7.9	B8	02 13.799	0.16	2	70.579	+4 17 03.60	0.15	2	70.579				8146
7795	-18	2155	7.6	K2	02 17.332	0.22	2	69.710	-18 50 27.18	0.12	2	69.710				8147
7796	+13	1831	5.11	A0	02 17.374	0.09	6	70.232	+13 15 42.17	0.11	6	70.232	2625	10959	1856	32625
7797	-0	1895	9.0	A5	02 19.791	0.17	2	71.554	-0 51 52.03	0.13	2	71.554				8148
7798	-5	2353	7.75	M0	02 20.803	0.03	2	70.652	-5 16 08.31	0.22	2	70.652				8149
7799	-11	2226	8.7	K5	02 22.034	0.05	2	70.652	-11 53 10.99	0.02	2	70.652		10961		8150
7800*	-25	5530	6.66	K2	02 26.442	0.06	4	68.651	-25 33 24.28	0.07	4	68.651		10963		8151
7801	-3	2202	6.72	A0	02 28.371	0.15	3	71.709	-3 21 09.99	0.14	3	71.709		10965		8152
7802	-65	861	8.3	K5	02 32.959	0.06	4	69.574	-66 04 11.37	0.09	4	69.574				19144
7803	-39	3951	8.3	K5	02 35.290	0.09	4	69.564	-39 16 05.27	0.21	4	69.564				8153
7804	-32	4805	8.6	G5	02 35.425	0.09	5	70.067	-32 51 19.41	0.08	4	70.059				8154
7805	-23	6755	8.5	K0	02 37.476	0.39	4	69.473	-23 41 50.76	0.08	4	69.473				8155

7760 A 6534AB, 9.0m-13.2m, 1°1, 288°.

7800 A 6566, 6.7m-10.0m, 1°9, 23°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
7806	-29	5474	7.62	M1	8 02 38.008	0.08	4	69.482	-29 49 22.75	0.08	4	69.482		10968		8156
7807	+1	1990	8.09	A0	02 59.500	0.01	2	71.476	+0 50 12.98	0.01	2	71.476		10978		8157
7808*	-0	1902	9.1	G5	03 00.038	0.14	6	70.922	-0 48 37.17	0.10	4	70.846				26434
7809	-9	2361	8.1	K	03 01.384	0.04	2	69.674	-9 47 02.01	0.03	2	69.674				8158
7810	-14	2362	8.3	K5	03 02.446	0.13	2	70.626	-14 31 50.58	0.12	2	70.626				8159
7811	-78	284	7.58	K0	8 03 09.043	0.19	4	70.029	-79 00 59.53	0.14	4	70.029		10983		19145
7811 SP					03 09.034	0.17	4	70.042	-79 00 58.96	0.45	4	70.042		10983		19145
7812	+3	1891	8.2	G5	03 10.905	0.02	2	70.514	+3 18 58.61	0.29	2	70.514				8160
7813	-0	1903	6.60	K0	03 16.398	0.16	2	71.447	-0 25 46.11	0.43	2	71.447		10986	1859	8161
7814	-50	3138	6.00	K0	03 18.212	0.09	6	69.305	-50 26 49.23	0.11	6	69.305	2626	10987	1860	32626
7815	-6	2450	8.6	K0	8 03 22.603	0.24	3	71.036	-6 18 03.37	0.16	2	71.506				8162
7816	-24	6446	8.1	K0	03 26.119	0.14	4	69.165	-25 04 40.17	0.07	4	69.165				8163
7817	-55	1443	9.1	K5	03 34.451	0.14	4	69.060	-55 45 50.85	0.22	4	69.060				8164
7818	+0	2185	8.4	A0	03 46.133	0.19	2	71.528	+0 27 00.50	0.03	2	71.528		10998		8165
7819	-7	2347	8.6	A0	03 47.763	0.18	2	70.579	-7 36 48.31	0.03	2	70.579				8166
7820	-68	725	6.84	K0	8 03 47.794	0.12	6	68.979	-68 47 37.23	0.15	6	68.979	2628	11000		32628
7821	-62	952	7.77	K0	03 47.993	0.07	4	69.153	-62 41 48.76	0.13	4	69.153		11001		8167
7822	-57	1393	8.4	A3	03 52.842	0.05	4	69.587	-57 38 11.07	0.12	4	69.587				8168
7823	-20	2382	8.7	K5	03 54.848	0.17	3	68.332	-20 22 44.44	0.11	3	68.332				8169
7824	-1	1955	7.8	G5	03 54.915	0.04	2	70.547	-2 14 57.17	0.03	2	70.547				8170
7825	-58	1045	7.9	K5	8 03 57.969	0.13	4	69.115	-58 12 54.56	0.29	4	69.115				8171
7826	-46	3767	9.0	K2	03 58.129	0.01	4	69.542	-46 30 36.41	0.12	4	69.542				958
7827	-62	953	6.42	B3	04 00.373	0.07	6	70.417	-62 41 33.53	0.19	6	70.417		11005		21009
7828	+2	1872	8.5v	F5	04 02.836	0.06	4	69.214	+2 04 27.37	0.13	4	69.214				26438
7829	-66	796	7.83	A2	04 13.395	0.04	4	69.053	-67 03 52.84	0.13	4	69.053		11010		19146
7830	-21	2262	8.3	K5	8 04 14.183	0.08	4	69.617	-22 04 55.81	0.16	4	69.617				8172
7831	-44	4034	9.2	K0	04 16.366	0.08	4	69.592	-44 46 50.24	0.08	4	69.592				959
7832*	+9	1873	8.8	A2	04 16.394	0.22	4	71.329	+9 01 57.61	0.26	4	71.329				26439
7833	-36	4196	7.9	K2	04 17.404	0.04	4	69.577	-36 15 42.08	0.20	4	69.577				8173
7834	-1	1957	8.0	K0	04 19.724	0.36	2	70.510	-1 30 10.96	0.10	2	70.510				8174
7835	-16	2295	8.0	G5	8 04 23.201	0.06	2	69.710	-17 09 09.32	0.05	2	69.710				8175
7836	-33	4542	8.9	F2	04 24.130	0.09	5	70.092	-33 53 47.54	0.02	4	70.090				8176
7837	-30	5636	8.8	K2	04 32.123	0.05	4	70.347	-30 39 56.13	0.16	4	70.347				8177
7838	-26	5530	6.96	B9	04 46.899	0.13	5	69.685	-26 58 08.53	0.08	6	69.614	2629	11020		8178
7839	+22	1862	5.38	G0	04 49.466	0.03	6	69.179	+21 43 41.55	0.07	6	69.179	2630	11021	1866	32630
7840	-42	3890	9.0	K0	8 04 54.176	0.05	4	69.527	-42 43 09.20	0.10	4	69.527				960
7841	-40	3854	9.9	K0	05 02.550	0.10	4	70.016	-40 35 50.04	0.09	4	70.016				961
7842	-53	1533	7.9	K5	05 04.962	0.06	4	68.558	-53 54 02.80	0.12	4	68.558				8179
7843	-2	2437	6.80	M0	05 10.930	0.37	2	70.606	-3 15 38.66	0.21	2	70.606		11028		8180
7844	-8	2232	8.4	K0	05 11.557	0.08	2	70.594	-8 25 53.34	0.15	2	70.594				8181
7845	+4	1911	8.5	K0	8 05 12.006	0.10	2	70.583	+4 09 06.95	0.00	2	70.583				8182
7846	-23	6828	2.88	F5	05 24.683	0.02	140	71.524	-24 09 31.56	0.03	132	71.518	308	11034	1871	30308
7847	-12	2346	8.8	A0	05 25.011	0.02	2	70.622	-12 48 23.22	0.15	2	70.622				8183
7848	-31	5554	9.0	G5	05 25.067	0.17	4	70.013	-32 11 24.12	0.06	4	70.013				8184
7849	-41	3772	7.5	K5	05 34.003	0.16	4	69.962	-41 35 22.10	0.11	4	69.962				962
7850	-51	2839	8.5	G0	8 05 34.675	0.11	4	69.449	-51 39 52.35	0.12	4	69.449				963
7851	-27	5038	8.1	K5	05 39.698	0.15	4	70.051	-28 10 30.78	0.09	4	70.051				8185
7852	-13	2401	7.16	F8	05 41.871	0.14	2	69.669	-13 21 41.28	0.11	2	69.669		11042		8186
7853	-37	4271	7.80	K2	05 47.787	0.12	4	70.079	-37 17 22.05	0.11	4	70.079		11044		8187
7854	-22	2162	8.4	G0	05 48.129	0.07	4	70.649	-23 14 14.49	0.03	4	70.649				8188
7855	-0	1917	8.6	M0	8 05 53.410	0.08	3	71.264	-0 53 04.88	0.06	2	71.265				8189
7856	-25	5618	8.1	K5	06 02.200	0.09	5	70.986	-25 40 06.94	0.06	4	70.921				8190
7857	+2	1882	7.7	B9	06 02.319	0.29	3	71.840	+2 02 31.21	0.17	3	71.840				8191
7858	+3	1900	8.7	A0	06 04.487	0.17	2	71.652	+3 05 30.29	0.69	2	71.652				8192
7859	-14	2385	8.5	A0	06 04.768	0.33	2	71.942	-15 00 55.47	0.11	2	71.942				8193
7860	-48	3497	7.8	M1	8 06 05.675	0.10	4	70.064	-49 07 26.82	0.05	4	70.064				964
7861	-50	3167	7.9	G5	06 07.742	0.11	4	69.504	-50 57 53.06	0.14	4	69.504				965
7862	+2	1883	8.9	A0	06 12.201	0.16	2	71.655	+2 18 42.16	0.15	2	71.655				8194
7863	+0	2200	7.62	K5	06 14.459	0.10	2	72.023	+0 36 23.20	0.24	2	72.023		11057		8195
7864	-43	3967	8.9	K5	06 23.704	0.11	4	70.017	-43 30 00.28	0.19	4	70.017				966
7865	-54	1515	8.4	F8	8 06 24.747	0.09	4	69.626	-54 55 09.14	0.07	4	69.626				8196
7866	-59	982	8.4	--	06 30.075	0.13	4	69.542	-60 08 41.21	0.20	4	69.542				8197
7867	-19	2262	6.40	A3	06 30.834	0.11	4	70.124	-20 12 57.76	0.07	4	70.124		11066		8198
7868	-32	4896	8.8	K2	06 32.976	0.09	4	69.597	-33 06 45.26	0.16	4	69.597				8199
7869	-15	2274	8.6	A0	06 38.342	0.05	2	69.695	-15 49 50.50	0.27	2	69.695				8200
7870	+0	2203	8.2	A0	8 06 44.224	0.17	2	71.025	+0 01 50.06	0.03	2	71.025		11069		8201
7871	-4	2235	7.48	M0	06 46.374	0.34	2	71.705	-4 24 19.49	0.44	2	71.705			1877	8202
7872	-37	4288	6.36	B5	06 47.593	0.04	6	69.391	-37 32 02.64	0.09	6	69.391	2631	11070	1878	32631
7873	-18	2190	4.34	B3	06 47.630	0.11	6	70.243	-19 05 51.10	0.07	6	70.243	2632	11071	1879	32632
7874	-48	3505	8.8	M1	06 55.462	0.04	4	70.081	-48 27 54.79	0.06	4	70.081				967
7875	-21	2293	8.0	G5	8 07 04.237	0.09	3	70.634	-21 25 41.65	0.13	4	70.290				8203
7876	-1	1969	9.0	F0	07 04.532	0.04	2	71.632	-2 01 47.35	0.37	2	71.632				8204
7877	-65	876	7.71	K2	07 05.311	0.06	4	69.564	-65 49 47.14	0.16	4	69.564		11075		19147
7878	-29	5619	7.8	G5	07 05.757	0.14	4	70.062	-29 43 28.04	0.05	4	70.062				8205
7879	-11	2262	8.3	K2	07 13.273	0.29	2	70.669	-11 16 58.92	0.30	2	70.669				8206

7808 A 6573AB, 9.1m-10.0m, 0^h1, 28°.
7828 8.5m to 9.1m.

7832 A 6593AB, 9.3m-10.0m, 0^h5, 61°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*	
7880	-61	971	8.5	G8	8	07	13.474	0.09	4	69.654	-62	12	33.03	0.12	4	69.654			8207	
7881	-39	4040	7.14	K0	07	15.463	0.12	5	71.240	-39	21	57.15	0.10	5	71.240		11084		8208	
7882	-45	3816	8.5	K5	07	17.892	0.15	4	70.497	-45	49	33.99	0.10	3	70.357				968	
7883	-47	3636	8.7	K0	07	24.952	0.03	4	70.565	-47	40	35.48	0.18	4	70.565				969	
7884	+25	1865	5.83	G5	07	26.534	0.19	6	71.803	+25	39	30.47	0.12	6	71.803	2633	11091	1884	32633	
7885	-68	734	8.9	F5	8	07	36.941	0.13	7	71.581	-68	32	48.68	0.09	5	71.172				19148
7886	-52	1390	8.9	K2	07	38.972	0.08	4	70.630	-52	51	12.37	0.13	4	70.630				8209	
7887	-6	2489	7.68	M0	07	39.357	0.07	2	69.681	-6	35	47.71	0.17	2	69.681		11095		8210	
7888	-2	2465	8.7	A2	07	43.236	0.08	2	71.064	-3	07	12.44	0.00	2	71.064				8211	
7889	-36	4262	8.0	K0	07	45.818	0.10	4	71.033	-36	41	00.11	0.22	4	71.033				8212	
7890	-71	653	9.0	K0	8	07	46.024	0.04	4	70.876	-72	00	30.53	0.15	4	70.876				19149
7891	-42	3943	9.0	K0	07	55.286	0.12	5	70.898	-42	36	22.65	0.22	4	71.098				970	
7892	-43	3998	5.16	B3	07	56.914	0.05	10	71.614	-43	58	28.25	0.07	7	71.571	2634	11104		32634	
7893	-71	654	8.6	K5	07	58.514	0.27	4	70.650	-71	34	23.80	0.22	4	70.650				19150	
7894	-46	3847	1.92	OOp	07	59.420	0.04	46	70.980	-47	11	18.06	0.05	44	70.925	309	11105	1888	30309	
7895	-61	974	8.9	M0	8	07	59.424	0.24	4	70.777	-61	25	15.44	0.11	4	70.777				8213
7896	+3	1913	7.07	G5	08	03.723	0.03	2	72.018	+3	05	55.19	0.02	2	72.018		11108		8214	
7897	-34	4419	9.1	G0	08	04.538	0.14	4	70.339	-34	21	27.96	0.09	4	70.339				8215	
7898	-17	2372	8.7	K2	08	06.084	0.13	3	71.787	-18	02	35.33	0.00	3	71.787				8216	
7899	-9	2404	7.8	M1	08	06.308	0.07	2	71.675	-9	27	20.88	0.19	2	71.675				8217	
7900	-32	4927	7.7	K5	8	08	09.012	0.12	4	70.618	-32	46	11.05	0.15	4	70.618				8218
7901	-60	1074	4.80	F5	08	10.597	0.08	6	71.233	-61	09	06.94	0.18	5	71.234	2636	11115		32636	
7902	-35	4280	8.8	K2	08	18.762	0.08	4	70.896	-35	29	52.51	0.14	4	70.896				8219	
7903	-13	2420	5.64	G0	08	20.360	0.06	6	71.122	-13	39	02.28	0.09	6	71.122	2637	11118	1891	32637	
7904	-37	4316	7.7	K0	08	22.530	0.11	5	70.966	-38	00	47.24	0.22	3	70.440				8220	
7905*	-29	5664	8.4	F5	8	08	22.639	0.19	4	69.121	-30	05	04.74	0.13	4	69.121				8221
7906	-55	1467	5.80	A2	08	23.718	0.08	6	70.752	-55	56	13.42	0.10	6	70.752	2638	11119	1892	32638	
7907	-59	991	8.3	G5	08	36.363	0.14	5	70.703	-60	04	18.83	0.15	5	70.703				8222	
7908	-73	484	8.8	A0	08	36.973	0.11	4	71.106	-73	19	57.30	0.21	4	71.106				19151	
7909	-64	828	7.49	K0	08	37.990	0.07	4	70.652	-64	37	40.14	0.28	4	70.652		11126		19152	
7910	-1	1976	8.1	A0	8	08	40.923	--	1	72.197	-1	25	00.52	--	1	72.197				8223
7911	-2	2472	8.5	F0	08	46.871	0.42	2	71.038	-2	27	19.33	0.08	2	71.038				8224	
7912	+4	1928	8.3	G5	08	48.909	0.05	2	71.054	+4	31	48.87	0.09	2	71.054				8225	
7913	-47	3665	8.5	G5	09	01.965	0.06	4	70.194	-48	02	15.95	0.18	4	70.194				971	
7914	-26	5649	8.5	K5	09	05.247	0.09	4	70.072	-26	44	04.46	0.11	4	70.072				8226	
7915	-14	2404	8.1	K0	8	09	10.849	0.19	2	70.598	-14	17	17.72	0.01	2	70.598				8227
7916	-74	489	8.9	K2	09	19.320	0.06	4	71.261	-74	22	25.24	0.13	4	71.261				19153	
7917	-12	2390	8.9	A0	09	26.997	0.11	3	71.752	-12	31	43.06	0.12	3	71.752				8228	
7918	-7	2381	8.8	K0	09	28.169	0.14	2	71.685	-7	57	47.61	0.28	2	71.685				8229	
7919	-45	3858	9.0	K0	09	30.190	0.07	4	71.243	-45	42	08.61	0.21	3	71.352				972	
7920	-8	2263	8.3	A2	8	09	47.217	0.06	2	70.695	-8	23	06.23	0.21	2	70.695				8230
7921	-54	1540	9.0	G5	09	52.450	0.06	4	70.106	-54	46	17.53	0.11	4	70.106				8231	
7922	-63	905	9.0	F	09	57.830	0.10	4	69.650	-63	53	49.82	0.02	4	69.650				8232	
7923	-10	2422	8.4	K0	10	01.245	0.27	2	70.714	-10	40	54.81	0.06	2	70.714				8233	
7924	+30	1664	5.59	AOp	10	03.102	0.10	6	69.027	+29	48	28.39	0.11	6	69.027	2641	11163		32641	
7925	-28	5625	8.5	K0	8	10	07.919	0.15	4	70.313	-28	25	33.50	0.04	4	70.313				8234
7926	-40	3951	8.8	K5	10	13.956	0.14	4	70.540	-40	20	01.26	0.13	4	70.540				973	
7927	-78	297	6.84	K0	10	15.588	0.01	257	71.334	-78	32	45.40	0.02	247	71.305	2642	11169	1898	62642	
7927 SP					10	15.552	0.02	143	71.215	-78	32	45.49	0.06	139	71.229	2642	11169	1898	72642	
7928	-48	3585	8.0	K0	10	19.192	0.07	4	70.582	-48	15	27.41	0.14	4	70.582				974	
7929	-55	1481	8.9	G5	8	10	25.294	0.08	4	70.591	-56	12	33.65	0.11	4	70.591				8235
7930	-51	2880	7.9	A0	10	35.218	0.13	6	71.548	-51	48	42.30	0.12	6	71.548				975	
7931*	-15	2319	8.8	A5	10	35.821	0.23	2	70.741	-16	03	52.85	0.37	2	70.741				8236	
7932	-70	732	8.1	K0	10	41.561	0.22	4	70.054	-70	38	01.47	0.16	4	70.054				19154	
7933	+3	1924	8.9	G5	10	41.899	0.04	2	71.592	+3	16	59.10	0.06	2	71.592				8237	
7934	-53	1558	8.7	K5	8	10	42.154	0.19	4	70.606	-53	38	14.48	0.10	4	70.606				8238
7935	-36	4325	7.6	K2	10	42.845	0.11	4	70.079	-36	30	58.05	0.13	4	70.079				8239	
7936	-49	3413	8.5	G5	10	45.635	0.11	4	70.157	-49	40	40.63	0.18	4	70.157				976	
7937	-0	1938	6.51	K0	10	49.162	0.11	6	69.543	-1	00	51.11	0.11	6	69.543	2643	11179		32643	
7938	-19	2289	8.3	K5	10	51.001	0.28	3	71.846	-19	18	19.81	0.21	2	71.705				8240	
7939	-67	889	8.2	K0	8	10	53.283	0.13	4	69.591	-67	31	01.13	0.19	4	69.591				19155
7940	-44	4162	9.2	K2	11	00.461	0.16	4	70.138	-44	14	26.66	0.20	4	70.138				977	
7941	-35	4337	8.3	G5	11	01.101	0.11	5	70.870	-35	14	30.14	0.19	4	70.564				8241	
7942	-15	2324	5.05	G5	11	02.007	0.02	142	71.426	-15	38	11.10	0.02	138	71.398	311	11184	1901	80311	
7943	-23	6970	8.5	K5	11	02.792	0.04	4	70.594	-23	49	06.06	0.07	4	70.594				8242	
7944	-17	2395	8.3	A2	8	11	04.082	0.19	2	71.020	-17	59	15.04	0.11	2	71.020				8243
7945	-6	2517	7.1	K0	11	06.888	0.02	2	70.640	-6	26	32.98	0.03	2	70.640				8244	
7946	+1	2035	8.6	K2	11	14.907	0.10	2	70.621	+1	24	32.58	0.12	2	70.621		11185		8245	
7947	-20	2446	8.1	K0	11	18.113	0.08	4	69.619	-20	25	22.06	0.13	4	69.619				8246	
7948	-59	1000	8.14	K5	11	18.956	0.17	4	70.581	-59	53	16.35	0.15	4	70.581		11188		8247	
7949	-50	3208	8.4	K2	8	11	21.612	0.20	4	69.608	-50	30	36.93	0.15	4	69.608				978
7950	-81	250	8.45	K5	11	27.287	0.05	5	70.524	-81	27	36.72	0.15	4	70.631		11193		19156	
7950 SP					11	27.238	0.13	3	70.470	-81	27	36.62	0.14	3	70.470		11193		19156	
7951	-21	2333	8.4	K0	11	32.530	0.03	4	70.042	-22	11	19.25	0.07	4	70.042				8248	
7952	-32	4997	7.6	K2	11	35.463	0.12	4	70											

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_{α}	N_{α}	Epoch $_{\alpha}$	Decl 1950.0	ϵ_{δ}	N_{δ}	Epoch $_{\delta}$	FK4	GC	N30	No*
7953	-41	3888	8.6	M0	8 11 37.435	0.14	4	70.009	-41 15' 43.86	0.05	3	69.707				979
7954	-5	2447	8.4	K0	11 48.986	0.17	2	69.749	-5 44 51.07	0.17	2	69.749				8250
7955	-31	5726	9.0	F0	11 50.754	0.09	4	70.094	-32 10 01.13	0.11	4	70.094				8251
7956	-3	2268	7.3	K2	11 53.929	0.28	2	69.674	-3 40 37.39	0.13	2	69.674				8252
7957*	-25	5764	8.7	F2	11 57.757	0.06	4	69.596	-25 33 33.05	0.14	4	69.596				8253
7958p	-37	4425	8.0	G5	8 12 05.194	0.15	5	70.514	-37 31 33.18	0.12	4	70.618				8254
7959	-24	6666	7.9	A5	12 05.249	0.09	4	70.306	-24 46 46.18	0.09	4	70.306				8255
7960	-85	150	9.0	K5	12 08.479	0.05	4	70.016	-85 32 39.17	0.31	4	70.016				19157
7960 SP					12 08.484	0.10	2	70.058	-85 32 38.63	0.19	2	70.058				19157
7961	-31	5742	6.10	B3	12 12.287	0.12	6	68.595	-31 59 16.60	0.12	6	68.595	2644	11214	1904	32644
7962	-43	4060	9.1	K2	8 12 13.873	0.06	4	70.181	-43 27 59.10	0.13	4	70.181				981
7963	-77	358	8.8	K0	12 14.253	0.13	4	69.957	-77 52 20.10	0.09	4	69.957				19158
7963 SP					12 14.251	0.28	4	70.083	-77 52 20.12	0.41	4	70.083				19158
7964	-66	807	8.8	K5	12 15.408	0.19	4	68.601	-66 14 18.40	0.13	4	68.601				19159
7965	-34	4508	8.3	G5	12 15.902	0.06	4	71.021	-34 38 20.91	0.12	4	71.021				8256
7966	-31	5744	8.6	K0	8 12 16.605	0.09	5	70.567	-31 48 00.46	0.16	5	70.567				8257
7967	-27	5190	8.3	G5	12 26.525	0.11	4	70.604	-27 15 49.33	0.17	4	70.604				8258
7968	-74	493	8.4	A3	12 27.410	0.04	4	69.632	-74 50 50.73	0.24	4	69.632				19160
7969	-46	3937	8.6	K0	12 32.801	0.11	4	70.525	-46 29 30.79	0.10	4	70.525				980
7970	-16	2363	6.88	F5	12 39.370	0.22	3	70.993	-17 07 23.13	0.10	2	71.441				8259
7971	-17	2407	8.7	K5	8 12 41.857	0.11	2	69.699	-17 32 42.53	0.23	2	69.699				8260
7972	-57	1440	8.3	K0	12 47.693	0.09	4	68.582	-57 36 55.02	0.13	4	68.582				8261
7973	+0	2232	8.4	K5	12 51.707	0.08	2	70.585	+0 03 58.60	0.06	2	70.585				8262
7974	-38	4210	9.0	G5	13 00.561	0.05	4	69.559	-38 15 32.94	0.18	4	69.559				8263
7975	-10	2439	8.0	K0	13 02.181	0.26	2	71.449	-11 08 20.73	0.14	2	71.449				8264
7976	-0	1947	8.4	G5	8 13 06.651	0.07	2	70.554	-1 05 36.27	0.07	2	70.554				8265
7977	-4	2272	8.8	G5	13 11.249	0.02	2	71.584	-4 49 35.82	0.32	2	71.584				8266
7978	+3	1933	7.07	A0	13 12.020	0.13	2	71.998	+2 57 19.91	0.19	2	71.998				8267
7979	-13	2452	7.20	M0	13 13.205	0.09	2	70.648	-13 28 12.91	0.18	2	70.648				8268
7980	-6	2533	8.2	K2	13 21.670	0.15	2	70.686	-7 10 55.87	0.06	2	70.686				8269
7981	+4	1943	8.4	K5	8 13 29.988	0.06	2	71.513	+3 57 03.65	0.12	2	71.513				8270
7982	-57	1447	8.1	K0	13 35.660	0.10	4	69.141	-58 00 36.68	0.08	4	69.141				8271
7983	-80	239	8.6	K5	13 41.134	0.06	4	69.044	-80 26 03.41	0.17	4	69.044				19161
7983 SP					13 40.990	0.05	4	70.029	-80 26 03.24	0.36	4	70.029				19161
7984	-55	1491	9.0	G5	13 42.689	0.10	4	70.016	-55 21 44.30	0.06	4	70.016				8272
7985	-42	4053	9.1	G5	8 13 45.562	0.09	5	70.622	-42 16 42.92	0.10	5	70.622				982
7986	-39	4154	8.1	K2	13 47.424	0.15	4	70.022	-40 06 50.14	0.04	3	69.724				8273
7987	-7	2408	8.8	G0	13 47.576	0.09	4	69.533	-7 48 57.72	0.22	4	69.533				26454
7988	+9	1917	3.76	K2	13 48.214	0.03	42	71.302	+9 20 26.62	0.05	38	71.215	312	11254	1908	30312
7989	-2	2503	8.8	K3	13 54.411	0.06	3	71.807	-2 43 50.98	0.03	2	71.663				8274
7990	-47	3740	8.5	G5	8 13 55.975	0.12	4	69.563	-47 26 31.97	0.12	4	69.563				983
7991	-30	5948	8.3	K5	13 56.022	0.09	4	69.113	-30 59 59.40	0.08	4	69.113				8275
7992	-29	5836	7.03	G5	13 57.518	0.18	3	69.065	-30 01 47.67	0.10	4	69.114				8276
7993	-8	2290	7.6	G5	14 17.811	0.15	3	72.497	-8 53 53.92	0.14	3	72.497				8277
7994	-35	4406	6.99	G5	14 18.859	0.16	5	70.405	-35 43 38.96	0.13	4	70.482				8278
7995	-46	3977	9.0	K0	8 14 28.626	0.10	4	70.072	-46 31 13.27	0.07	4	70.072				984
7996	-43	4116	8.7	K5	14 29.490	0.08	4	70.104	-43 28 54.43	0.05	4	70.104				985
7997	-14	2456	7.26	K2	14 33.308	0.15	2	69.674	-14 59 47.84	0.17	2	69.674				8279
7998	-2	2509	6.58	B9	14 39.047	0.07	3	71.137	-3 12 29.13	0.05	2	71.658				8280
7999	+4	1945	6.68	*	14 40.580	0.02	129	71.325	+4 22 29.14	0.03	124	71.289	1216	11285	1911	81216
8000	-44	4241	9.1	K0	8 14 43.364	0.10	4	69.632	-45 00 31.81	0.20	4	69.632				986
8001	-1	2001	8.5	K0	14 46.971	0.08	2	71.630	-1 40 58.78	0.43	2	71.630				8281
8002	-12	2438	8.8	K2	14 50.427	-	1	70.113	-12 43 39.75	-	1	70.113				8282
8003	+11	1808	8.8	G5	14 52.091	0.08	4	70.108	+10 59 34.29	0.06	4	70.108				26457
8004	-70	747	8.9	K5	14 53.295	0.11	4	69.588	-70 40 13.41	0.10	4	69.588				19162
8005	+1	2056	7.6	K0	8 15 00.600	0.11	2	69.777	+1 18 07.40	0.22	2	69.777				8283
8006	+0	2248	8.0	A2	15 04.605	0.21	2	71.091	+0 38 07.46	0.00	2	71.091				8284
8007	+3	1942	7.67	K2	15 07.559	0.30	2	71.053	+2 56 58.59	0.31	2	71.053				8285
8008	-21	2362	8.5	K5	15 11.617	0.13	4	69.134	-21 40 23.43	0.05	4	69.134				8286
8009	-51	2924	9.1	K2	15 13.466	0.09	4	70.074	-51 18 10.25	0.19	4	70.074				987
8010	-18	2257	8.1	A2	8 15 20.114	0.08	2	71.080	-18 47 59.98	0.30	2	71.080				8287
8011	-25	5843	7.18	F5	15 22.584	0.09	4	70.329	-26 08 44.78	0.09	4	70.329				8288
8012	-28	5775	7.59	K0	15 23.679	0.11	4	69.144	-28 58 33.45	0.08	4	69.144				8289
8013	-45	3959	7.97	K0	15 24.293	0.17	4	70.543	-45 35 46.69	0.14	4	70.543				988
8014	-24	6751	8.0	M0	15 26.465	0.16	4	69.608	-24 50 46.44	0.10	4	69.608				8290
8015	-18	2261	8.7	K2	8 15 34.298	0.07	2	70.662	-18 29 28.58	0.04	2	70.662				8291
8016	-16	2387	8.2	K0	15 43.372	0.01	2	70.999	-16 42 15.24	0.02	2	70.999				8292
8017	-57	1462	8.61	K0	15 52.292	0.16	4	69.095	-57 18 21.90	0.39	4	69.095				8293
8018*	+1	2059	9.1	K0	15 55.285	0.10	3	70.014	+0 52 09.72	0.04	3	70.014				26460
8019	-9	2463	7.7	K0	15 56.755	0.02	2	71.596	-9 58 09.24	0.08	2	71.596				8294
8020	-7	2423	7.54	F0	8 15 58.265	0.11	3	71.757	-7 24 52.33	0.31	3	71.757				8295
8021	-41	3960	8.7	K0	16 06.649	0.04	4	70.073	-41 46 15.11	0.22	3	69.792				989
8022	-48	3670	9.8	G5	16 08.743	0.09	4	70.083	-48 58 37.63	0.18	4	70.083				990
8023	-38	4272	8.8	F0	16 10.782	0.11	6	71.122	-38 40 22.28	0.20	4	71.134				8296
8024	-5	2486	8.7	G5	16 15.939	0.04	2	71.562	-6 01 28.43	0.22	2	71.562				8297

7957 8.7m-10.9m, 0°6, 236°.
7958 SDS, 10.7m, 3°0, 4°.

7999 G0+A2.
8018 A 6734AB, 9.2m-9.8m, 0°2, 332°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
8025	-14	2465	8.5	K7	8 16 16.387	0.06	3	71.832	-15 16 31.08	0.05	2	71.678				8298
8026	-73	490	8.8	A0	16 19.574	0.08	4	69.542	-74 04 23.47	0.11	4	69.542				19163
8027	-21	2370	8.6	G5	16 23.289	0.10	4	70.144	-21 54 48.29	0.07	4	70.144				8299
8028	+ 2	1932	8.5	F8	16 27.187	0.11	3	71.874	+ 2 40 54.95	0.15	2	71.746				8300
8029	-20	2480	8.7	A0	16 31.437	0.07	5	70.892	-20 23 16.62	0.09	5	70.892				8301
8030	-36	4447	9.1	K0	8 16 33.234	0.10	4	70.182	-36 27 26.80	0.14	4	70.182				8302
8031	-32	5115	8.5	G5	16 35.868	0.18	4	70.092	-32 16 08.06	0.19	4	70.092				8303
8032*	-65	903	8.9	F0	16 40.039	0.13	4	69.586	-65 30 02.48	0.16	4	69.586				19164
8033	-36	4449	4.43	A5	16 40.734	0.03	69	71.259	-36 30 10.09	0.03	65	71.231	313	11343	1922	30313
8034	-62	992	8.8	F0	16 42.480	0.12	4	69.645	-62 42 28.16	0.13	4	69.645				8304
8035	- 5	2489	7.1	G0	8 16 46.701	0.08	2	71.584	- 5 27 43.93	0.10	2	71.584				8305
8036	- 9	2471	6.32	A5	16 51.210	0.02	73	71.482	-10 00 29.90	0.03	72	71.501	1218	11346	1923	31218
8037	-84	174	7.7	M1	16 58.790	0.13	4	69.566	-84 17 30.64	0.17	4	69.566				19165
8037 SP					16 58.682	0.34	4	69.964	-84 17 30.32	0.23	4	69.964				19165
8038	+27	1589	5.16	F5	17 01.788	0.05	16	71.241	+27 22 43.84	0.09	14	71.200	1217	11348	1925	31217
8039	- 0	1962	8.0	K0	8 17 02.607	0.11	2	70.598	- 0 37 51.83	0.10	2	70.598				8306
8040	-11	2315	7.6	F5	17 07.197	0.04	2	69.692	-11 43 29.29	0.07	2	69.692				8307
8041	-23	7126	7.7	K5	17 08.726	0.12	3	69.808	-23 38 20.90	0.18	4	69.671				8308
8042	-26	5854	8.4	K0	17 09.090	0.04	4	69.996	-26 38 31.53	0.06	4	69.996				8309
8043	-69	879	8.5	K7	17 12.472	0.10	4	70.090	-69 18 25.51	0.11	4	70.090				19166
8044	+ 5	1934	8.6	A2	8 17 14.137	0.46	2	70.550	+ 4 54 03.59	0.28	2	70.550				8310
8045	-40	4094	8.4	K0	17 17.311	0.13	4	69.988	-40 41 32.29	0.14	4	69.988				991
8046	-59	1018	8.07	K0	17 25.591	0.15	3	69.710	-60 09 12.81	0.22	3	69.710		11357		8311
8047	+21	1817	5.93	G5	17 26.195	0.06	6	69.588	+20 54 23.87	0.08	6	69.588	2646	11358	1926	32646
8048	-36	4468	8.6	K0	17 27.559	0.11	4	70.090	-37 00 41.83	0.17	4	70.090				8312
8049	-25	5897	8.2	K5	8 17 33.143	0.11	4	69.559	-25 15 55.71	0.05	4	69.559				8313
8050	-10	2477	8.7	G5	17 44.456	0.28	2	70.603	-11 10 05.62	0.10	2	70.603				8314
8051	-34	4632	8.2	A0	17 49.491	0.18	4	70.626	-35 09 28.05	0.17	4	70.626				8315
8052	-71	671	8.4	K0	17 50.225	0.08	4	69.998	-72 07 42.16	0.08	4	69.998				19167
8053	-54	1581	8.5	K5	17 53.077	0.12	4	69.122	-54 22 53.37	0.18	4	69.122				8316
8054	-50	3266	9.0	G5	8 18 14.942	0.09	4	70.054	-50 30 28.92	0.06	4	70.054				992
8055	-49	3495	7.23	K0	18 15.102	0.10	4	70.051	-49 22 41.56	0.12	4	70.051		11375		993
8056	-61	1007	8.27	K0	18 19.240	0.13	4	69.508	-61 32 38.54	0.09	4	69.508		11378		8317
8057	+ 2	1942	8.9	A2	18 22.231	0.07	2	70.618	+ 2 38 05.20	0.03	2	70.618				8318
8058	-29	5980	8.7	K0	18 25.452	0.09	4	69.064	-29 17 25.74	0.11	4	69.064				8319
8059	-13	2491	7.9	A3	8 18 25.818	0.25	2	69.697	-14 12 14.69	0.06	2	69.697				8320
8060	-33	4867	8.3	K5	18 26.278	0.13	4	70.040	-33 37 00.98	0.31	4	70.040				8321
8061	-34	4646	8.6	G	18 27.345	0.09	4	70.033	-34 17 44.78	0.06	4	70.033				8322
8062	- 3	2314	8.4	K0	18 35.176	0.12	2	70.590	- 4 15 12.11	0.25	2	70.590				8323
8063	-53	1625	8.18	K0	18 39.265	0.21	4	69.634	-53 31 45.45	0.05	4	69.634		11384		8324
8064	+ 1	2074	7.6	F2	8 18 41.210	0.07	4	71.524	+ 1 13 28.62	0.21	3	72.000		11385		8325
8065	-55	1512	9.0	A5	18 42.039	0.13	4	69.622	-56 05 27.59	0.15	4	69.622				8326
8066	-31	5923	9.3	K0	18 42.982	0.17	4	70.109	-31 29 48.19	0.14	4	70.109				8327
8067	- 7	2444	7.32	K0	18 49.511	0.25	2	70.680	- 7 53 53.65	0.36	2	70.680		11388		8328
8068	+ 4	1958	8.3	F2	18 52.111	0.01	2	69.762	+ 3 48 15.79	0.01	2	69.762				8329
8069	-52	1440	9.3	G0	8 19 02.102	0.12	4	69.555	-52 55 17.14	0.16	4	69.555				8330
8070	-30	6094	8.8	K5	19 04.949	0.09	3	69.413	-30 25 26.55	0.04	3	69.413				8331
8071	-19	2369	5.56	*	19 07.396	0.17	6	69.236	-19 55 08.27	0.15	6	69.236	2647	11393		32647
8072	-72	683	9.1	A0	19 08.605	0.25	4	69.567	-72 37 58.59	0.25	4	69.567				19168
8073	-67	918	8.3	K5	19 09.758	0.06	5	70.974	-68 10 41.35	0.15	5	70.974				19169
8074	-10	2490	6.90	F0	8 19 13.163	0.11	2	70.531	-10 53 07.89	0.00	2	70.531		11396		8332
8075	-20	2499	6.9	A0	19 17.288	0.07	3	69.175	-20 38 03.95	0.06	4	69.197				8333
8076	- 7	2448	9.0	F8	19 20.923	0.06	4	70.970	- 8 15 04.72	0.12	4	70.970				26468
8077	-32	5185	4.94	K0	19 24.770	0.02	107	71.190	-32 53 39.55	0.03	101	71.194	1219	11400	1939	31219
8078	-63	932	8.0	K0	19 27.580	0.06	4	70.037	-63 20 39.33	0.05	4	70.037				8334
8079	+ 0	2275	7.9	G5	8 19 30.044	0.48	2	70.550	+ 0 00 01.58	0.10	2	70.550				8335
8080	-39	4245	6.18	A5	19 35.525	0.07	6	70.940	-39 27 37.95	0.10	6	70.940	2648	11405	1941	32648
8081	+ 2	1948	6.92	K5	19 35.626	0.22	2	71.726	+ 2 18 43.39	0.02	2	71.726		11406		8336
8082	-17	2464	5.85	K0	19 38.252	0.21	2	71.712	-17 25 33.00	0.10	2	71.712		11409		8337
8083	-35	4516	8.8	G5	19 41.256	0.05	4	69.579	-35 48 40.56	0.08	4	69.579				8338
8084	-64	854	9.1	G5	8 19 48.403	0.04	4	70.161	-64 20 41.78	0.19	4	70.161				19170
8085	-37	4599	8.2	K2	19 51.027	0.18	4	70.078	-38 02 22.21	0.07	4	70.078				8339
8086	-13	2506	8.8	K5	19 53.649	0.19	2	71.786	-13 27 41.65	0.14	2	71.786				8340
8087	-44	4330	7.84	K0	19 59.255	0.07	5	70.569	-44 50 33.02	0.18	4	70.397		11423		994
8088	- 5	2512	6.07	A3	20 02.386	0.14	6	69.337	- 6 01 05.82	0.13	6	69.337	2650	11425		32650
8089	-28	5917	7.10	K0	8 20 02.619	0.07	4	69.621	-28 27 47.38	0.18	4	69.621		11426		8341
8090	-57	1490	6.07	B5	20 05.422	0.08	6	70.553	-57 48 46.42	0.14	6	70.553		11428	1942	21010
8091	- 9	2493	8.7	K5	20 11.543	0.03	2	70.771	- 9 20 47.55	0.10	2	70.771				8342
8092	-46	4094	9.2	K0	20 21.596	0.34	4	71.028	-46 50 24.41	0.29	4	71.028				995
8093	-12	2490	6.30	K0	20 25.724	0.10	3	72.242	-12 53 34.94	0.47	3	72.242		11435		8343
8094	+18	1930	5.88	F0	8 20 30.086	0.03	67	71.348	+18 29 38.44	0.04	62	71.352	1220	11438	1944	81220
8095*	-29	6041	6.99	F0	20 30.193	0.07	4	70.570	-29 31 52.02	0.36	4	70.570		11439		8344
8096	-16	2417	9.0	K0	20 30.901	0.28	2	71.795	-16 35 07.66	0.27	2	71.795				8345
8097	-37	4612	8.5	K5	20 36.167	0.06	4	70.517	-37 28 44.82	0.06	4	70.517				8346
8098	-39	4268	8.2	F5	21 03.089	0.07	4	70.661	-39 44 02.12	0.17	4	70.661				8348

8032 9.7m-10.4m, 0°8, 290°.
8071 G0+A3.

8095 7.3m-8.7m, 0°3, 267°.

CATALOG OF 23,001 STARS FOR 1950.0

347

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
8099	-18	2310	8.3	B9	8 21 03.131	0.06	2	69.764	-18 47 17.85	0.00	2	69.764				8347
8100p	-54	1611	9.1	K0	21 07.080	0.24	3	70.183	-55 03 37.36	0.14	3	70.183				8349
8101	-36	4555	9.0	G8	21 10.885	0.08	5	70.856	-36 29 43.56	0.10	4	71.046				8350
8102	-65	917	8.6	K0	21 12.899	0.09	4	70.496	-65 30 38.81	0.13	4	70.496				19171
8103	-59	1031	7.7	K0	21 15.672	0.03	4	70.615	-59 37 15.39	0.20	4	70.615				8351
8104	-58	1104	8.5	G5	8 21 22.125	0.22	4	70.168	-58 38 14.07	0.26	4	70.168				8352
8105	-1	2028	6.80	G5	21 23.823	0.00	2	70.630	-1 20 08.35	0.40	2	70.630		11459	1948	8353
8106	-23	7239	8.4	K5	21 28.266	0.18	3	69.815	-24 06 31.80	0.12	4	69.676				8354
8107	-2	2557	8.2	A0	21 29.110	0.05	2	71.647	-2 47 39.78	0.24	2	71.647				8355
8108	-59	1032	1.74	*	21 29.293	0.03	36	71.006	-59 20 52.91	0.04	36	71.006	315	11463	1949	30315
8109	-6	2579	8.3	A0	8 21 31.293	0.08	2	72.197	-7 06 07.14	0.18	2	72.197				8356
8110	-66	840	7.83	K2	21 31.382	0.18	5	70.970	-67 10 25.14	0.17	4	70.681		11465		19172
8111*	-42	4186	8.7	M0	21 42.135	0.10	4	70.031	-42 15 23.84	0.22	3	69.737				996
8112*	-15	2417	8.6	F2	21 42.271	0.10	3	71.816	-15 38 04.18	0.17	2	71.677				8357
8113	-26	5968	8.5	K0	21 44.440	0.06	4	69.057	-27 09 55.65	0.08	4	69.057				8358
8114	-28	5961	6.57	A0	8 21 45.574	0.12	6	69.643	-28 48 28.56	0.10	6	69.643	2651	11470	1950	32651
8115	-43	4233	9.2	K0	21 46.502	0.07	4	70.068	-43 18 06.10	0.17	4	70.068				997
8116	-2	2559	8.7	K0	21 50.072	0.08	4	71.991	-2 58 50.88	0.30	3	72.235				8359
8117	-51	2984	8.8	K2	21 52.449	0.15	4	70.067	-51 34 45.31	0.06	4	70.067				998
8118	-35	4567	9.1	K0	21 57.304	0.07	5	70.454	-35 52 52.35	0.11	4	70.291				8360
8119	+1	2087	8.7	K0	8 22 01.706	0.31	2	71.734	+1 38 28.28	0.10	2	71.734				8361
8120	-41	4080	9.2	G5	22 09.657	0.07	4	69.649	-41 29 37.18	0.27	4	69.649				999
8121	-77	383	4.26	K0	22 09.859	0.03	74	71.025	-77 19 25.22	0.04	71	70.991	318	11481	1953	30318
8121 SP					22 09.884	0.08	42	71.068	-77 19 25.35	0.14	42	71.068	318	11481	1953	50318
8122	-35	4570	7.4	A2	22 13.867	0.14	4	70.017	-35 20 46.17	0.12	4	70.017				8362
8123	+0	2290	8.2	G0	8 22 14.905	0.03	2	71.577	+0 01 25.95	0.02	2	71.577				8363
8124	-25	6029	8.5	K0	22 24.299	0.18	4	69.599	-25 57 33.92	0.27	4	69.599				8364
8125	-10	2508	8.6	K2	22 24.815	0.01	2	71.735	-10 34 54.66	0.41	2	71.735				8365
8126	-52	1457	8.6	K5	22 28.916	0.10	4	70.139	-52 23 10.19	0.22	4	70.139				8366
8127	-14	2508	8.3	K5	22 31.080	0.04	2	70.784	-14 40 32.32	0.20	2	70.784				8367
8128	-72	694	5.40	A2	8 22 32.341	0.13	6	69.614	-73 14 17.53	0.05	6	69.614	2653	11485	1955	32653
8128 SP					22 32.298	0.09	21	71.270	-73 14 17.83	0.20	21	71.270	2653	11485	1955	52653
8129	-32	5259	8.0	K5	22 41.064	0.07	4	69.975	-32 45 38.80	0.14	4	69.975				8368
8130	-45	4089	8.8	K0	22 43.551	0.09	4	69.590	-45 43 54.71	0.09	4	69.590				1000
8131	-23	7277	5.55	K5	22 54.080	0.03	88	71.351	-23 52 58.11	0.03	81	71.308	1221	11491	1956	31221
8132	-63	957	8.5	K3	8 22 56.192	0.09	4	70.104	-63 34 09.80	0.13	4	70.104				8369
8133	+3	1976	8.3	K0	22 58.733	0.12	2	71.671	+3 39 16.79	0.29	2	71.671				8370
8134	+2	1965	5.91	K0	22 59.771	0.10	6	70.291	+2 15 58.62	0.16	6	70.291	2654	11493		32654
8135	-30	6219	8.8	G5	23 01.396	0.17	5	70.704	-31 06 44.39	0.10	4	70.595				8371
8136	-20	2522	6.00	F2	23 06.047	0.17	4	69.555	-20 52 57.51	0.28	4	69.555				8372
8137	-21	3426	6.98	K0	8 23 06.479	0.16	4	70.105	-21 58 36.05	0.15	4	70.105				8373
8138	-3	2339	3.95	A0	23 09.618	0.04	35	71.947	-3 44 32.06	0.05	34	71.938	316	11499	1959	30316
8139	+2	1967	6.71	K0	23 13.102	0.02	2	69.760	+1 44 19.67	0.20	2	69.760				8374
8140	+8	2053	5.23	K0	23 13.848	0.08	8	71.834	+7 43 43.43	0.14	7	71.792	2655	11505	1960	32655
8141	-60	1114	9.0	K0	23 16.050	0.16	4	70.024	-60 29 10.12	0.26	4	70.024				8375
8142	-3	2341	7.5	K5	8 23 18.724	0.21	2	71.631	-4 00 49.24	0.01	2	71.631				8376
8143	-33	4988	7.9	G5	23 20.811	0.11	5	70.061	-34 12 10.39	0.14	4	70.052				8377
8144	-16	2442	6.44	K0	23 22.506	0.10	2	71.077	-17 16 30.78	0.17	2	71.077		11507		8378
8145	+28	1602	5.83	K2	23 25.397	0.11	6	72.017	+28 03 32.72	0.19	6	72.017	2656	11509		32656
8146	-77	388	8.9	M0	23 30.696	0.12	6	70.922	-77 41 33.02	0.13	5	71.088				19173
8146 SP					8 23 30.548	0.08	2	70.170	-77 41 32.88	0.29	2	70.170				19173
8147	-5	2525	8.8	K0	23 35.899	0.05	2	70.671	-5 21 58.51	0.11	2	70.671				8379
8148	-14	2517	5.91	A2	23 36.163	0.10	6	70.000	-14 45 56.16	0.10	6	70.000	2657	11512	1962	32657
8149	-10	2514	6.56	A2	23 37.293	0.04	2	71.641	-10 21 07.77	0.15	2	71.641				8380
8150	-8	2355	6.88	F0	23 40.568	0.16	2	72.028	-8 21 01.57	0.32	2	72.028				8381
8151	-11	2355	8.3	G5	8 23 43.009	0.18	2	72.110	-11 49 10.97	0.36	2	72.110				8382
8152	-29	6146	8.6	K2	23 48.916	0.15	6	71.061	-29 54 09.50	0.17	6	71.061				8383
8153	-19	2403	8.5	K5	23 50.061	0.35	2	71.755	-19 26 45.34	0.27	2	71.755				8384
8154	-6	2591	8.6	K5	23 55.069	0.11	3	71.037	-6 18 29.60	0.20	2	71.002				8386
8155	-33	5004	8.6	--	23 55.124	0.11	4	70.076	-33 23 58.67	0.07	3	69.796				8385
8156	+13	1912	5.75	M0	8 23 58.060	0.05	6	70.786	+12 49 13.13	0.12	6	70.786	2658	11525		32658
8157	-50	3327	9.0	K2	24 00.098	0.11	4	69.626	-50 45 08.82	0.09	4	69.626				1001
8158	-17	2493	8.0	K5	24 01.590	0.06	3	71.936	-17 54 21.95	0.30	2	72.273				8387
8159	-22	2268	8.4	K5	24 02.052	0.09	4	70.592	-22 54 08.17	0.10	4	70.592				8388
8160	-56	1632	8.9	F5	24 15.231	0.10	4	70.025	-56 36 01.00	0.21	4	70.025				8389
8161	-0	1993	8.0	K0	8 24 19.325	0.18	2	71.727	-1 03 01.31	0.05	2	71.727				8390
8162	-21	2438	8.6	K0	24 19.705	0.16	5	70.986	-21 23 51.85	0.17	5	70.986				8391
8163	-40	4240	7.5	K0	24 21.075	0.11	4	69.638	-40 37 17.07	0.11	4	69.638				1002
8164	-66	847	9.2	K0	24 24.256	0.43	4	69.598	-66 37 26.14	0.18	4	69.598				19174
8165	-8	2362	8.6	K5	24 37.029	0.08	2	70.786	-9 14 32.66	0.18	2	70.786				8392
8166	-29	6176	8.9	K5	8 24 37.443	0.10	3	71.092	-30 07 55.15	0.12	4	70.634				8393
8167	-54	1636	8.74	K0	24 37.683	0.25	4	70.592	-54 37 37.79	0.18	4	70.592		11548		8394
8168	-49	3550	8.8	K5	24 39.710	0.01	4	70.075	-49 46 36.08	0.11	4	70.075				1003
8169	-38	4467	9.3	K0	24 44.071	0.18	4	69.659	-39 06 28.44	0.32	4	69.659				8395
8170	-62	1020	8.4	K2	24 46.195	0.11	4	70.593	-62 43 56.41	0.19	4	70.593				8396

8100 SDS, 11.1m, 2.5, 75°.
8108 K0+B.

8111 9.3m-9.8m, 1.3, 197°.
8112 8.3m-9.8m, 1.1, 158°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
8171	-15	2441	7.9	K5	8	24	46.619	0.33	2	70.617	-15° 28'	37.59	0.32	2	70.617				8397
8172	-47	3953	7.9	K2	24	53.267	0.05	4	70.038	-48° 01'	11.07	0.14	4	70.038				1004	
8173	+1	2095	7.8	G0	24	56.753	0.37	2	71.942	+0° 59'	38.03	0.33	2	71.942		11556		8398	
8174	-48	3797	8.4	K0	25	00.738	0.09	4	70.097	-48° 31'	29.93	0.16	4	70.097				1005	
8175	-52	1474	6.14	A0	25	02.206	0.13	8	71.072	-52° 38'	31.73	0.21	6	71.072	2661	11559		32661	
8176	-36	4643	7.7	K5	8	25	02.703	0.09	4	70.516	-36° 30'	54.87	0.15	4	70.516				8399
8177	-71	692	8.6	K5	25	03.877	0.08	4	70.143	-71° 33'	28.63	0.17	4	70.143				19175	
8178	-57	1520	8.7	F8	25	04.470	0.13	4	70.656	-57° 44'	18.89	0.28	4	70.656				8400	
8179	-4	2347	7.5	G0	25	06.356	0.25	2	71.745	-4° 58'	55.65	0.07	2	71.745				8401	
8180	-14	2526	6.55	B5	25	07.361	0.28	2	72.087	-14° 46'	10.19	0.22	2	72.087		11563		8402	
8181	-64	876	8.1	K0	8	25	08.016	0.13	4	70.648	-64° 17'	03.65	0.05	4	70.648				19176
8182	-37	4711	7.7	K2	25	11.497	0.11	4	70.052	-37° 46'	38.24	0.13	4	70.052				8403	
8183	-65	933	3.65	K0	25	11.774	0.03	64	71.280	-65° 58'	14.08	0.04	59	71.191	319	11567	1967	30319	
8184	+5	1974	8.3	G5	25	17.859	0.04	2	70.779	+4° 59'	15.48	0.03	2	70.779				8404	
8185	+3	1983	7.1	K0	25	18.815	0.18	2	71.079	+3° 23'	05.25	0.05	2	71.079				8405	
8186*	-20	2538	6.44	A0	8	25	19.843	0.13	4	70.212	-20° 40'	40.27	0.14	4	70.212		11570		8406
8187	-27	5496	7.9	K0	25	23.630	0.09	4	69.557	-28° 07'	09.10	0.20	4	69.557				8407	
8188	-7	2491	8.6	K5	25	24.074	0.24	3	72.340	-7° 55'	10.14	0.18	3	72.340				8408	
8189	-13	2549	8.3	K5	25	25.987	0.07	3	72.110	-13° 25'	37.78	0.21	2	72.040				8409	
8190	+1	2096	9.0	K2	25	26.053	0.02	2	69.770	+0° 57'	07.83	0.14	2	69.770				8410	
8191	-50	3351	9.3	K0	8	25	36.486	0.27	5	70.348	-50° 33'	38.02	0.15	4	70.601				1006
8192	-24	6971	7.56	K2	25	37.549	0.19	4	69.568	-24° 43'	30.21	0.06	4	69.568		11579		8411	
8193*	+7	1981	8.6	F8	25	39.653	0.13	4	70.087	+6° 57'	33.68	0.13	4	70.087				26480	
8194	-70	774	7.7	K2	25	41.396	0.07	4	70.530	-70° 53'	07.87	0.22	4	70.530				19177	
8195	-32	5324	8.0	K0	25	43.960	0.12	5	70.037	-33° 13'	00.17	0.12	4	70.021				8412	
8196	-78	337	8.8	K5	8	25	44.339	0.08	4	69.528	-78° 33'	11.37	0.24	4	69.528				19178
8196 SP					25	44.366	0.31	4	69.980	-78° 33'	11.00	0.17	4	69.980				19178	
8197	-74	509	7.56	G5	25	44.986	0.07	5	70.548	-74° 44'	51.00	0.22	4	70.152		11582		19179	
8198	-25	6109	5.64	A2	25	46.241	0.10	4	69.053	-25° 57'	59.19	0.09	4	69.053		11583		8413	
8199	+14	1899	5.90	A2	25	49.998	0.02	107	71.238	+14° 22'	39.49	0.03	103	71.224	1222	11584	1970	81222	
8200	-27	5512	7.8	B5	8	26	06.849	0.11	4	69.615	-27° 23'	52.94	0.12	4	69.615				8414
8201	+5	1978	8.7	K2	26	16.515	0.14	2	69.681	+4° 58'	29.60	0.33	2	69.681				8415	
8202	-9	2532	5.98	F2	26	26.390	0.04	2	70.562	-9° 34'	53.12	0.17	2	70.562		11600		8416	
8203	-51	3036	8.8	K2	26	26.961	0.15	4	69.581	-51° 34'	31.67	0.10	4	69.581				1007	
8204	-41	4169	7.3	K2	26	29.134	0.18	4	69.566	-42° 03'	49.68	0.09	4	69.566				1008	
8205	+0	2310	8.0	A0	8	26	34.462	0.02	2	70.457	-0° 07'	57.91	0.06	2	70.457				8417
8206	-5	2544	7.7	K0	26	37.533	0.31	2	70.621	-5° 42'	31.42	0.17	2	70.621				8418	
8207	-38	4515	8.3	F5	26	41.793	0.10	4	69.579	-38° 55'	31.88	0.12	4	69.579				8419	
8208	-52	1490	8.98	K0	26	47.075	0.13	4	69.507	-52° 35'	36.47	0.10	4	69.507		11606		8420	
8209	+12	1853	8.3v	*	26	51.726	0.04	4	69.605	+12° 37'	24.33	0.02	4	69.605				26482	
8210	-0	2000	6.92	K0	8	26	57.611	0.20	2	70.513	-0° 47'	32.49	0.08	2	70.513		11614		8421
8211	-28	6106	7.48	K0	27	06.196	0.11	4	69.112	-28° 29'	53.11	0.14	4	69.112		11616		8422	
8212	-3	2368	8.5	A2	27	06.296	0.14	2	71.524	-3° 42'	45.63	0.17	2	71.524				8423	
8213	-2	2589	8.8	G5	27	11.139	0.17	2	70.632	-2° 59'	01.35	0.37	2	70.632				8424	
8214	-26	6099	8.5	K0	27	13.787	0.16	3	69.037	-26° 45'	13.23	0.14	4	69.093				8425	
8215	-80	258	5.60	K0	8	27	21.028	0.05	6	69.000	-80° 45'	02.32	0.17	6	69.000	2664	11625		32664
8215 SP					27	21.090	0.17	6	69.136	-80° 45'	01.97	0.28	6	69.136	2664	11625		52664	
8216	-76	516	8.6	K2	27	21.127	0.15	4	70.457	-76° 26'	08.92	0.10	4	70.457				19180	
8216 SP					27	21.057	0.19	4	70.468	-76° 26'	08.80	0.34	4	70.468				19180	
8217	-43	4337	5.94	B3	27	25.466	0.08	6	69.571	-43° 59'	33.59	0.13	6	69.571	2665	11628		32665	
8218	-57	1535	7.8	K0	8	27	29.610	0.17	4	69.119	-58° 12'	08.17	0.15	4	69.119				8426
8219	-33	5084	7.5	K0	27	33.346	0.07	4	69.585	-34° 05'	39.21	0.17	4	69.585				8427	
8220	-43	4342	8.8	K0	27	40.263	0.06	4	69.631	-43° 28'	04.32	0.12	4	69.631				1009	
8221	-16	2478	8.4	K0	27	41.434	0.15	3	71.016	-16° 32'	50.75	0.22	2	71.476				8428	
8222	-32	5363	8.5	K2	27	44.870	0.10	4	70.066	-32° 34'	52.87	0.19	4	70.066				8429	
8223	+3	1992	8.3	K2	8	27	46.311	0.07	2	70.648	+3° 00'	43.91	0.25	2	70.648				8430
8224	-52	1500	8.4	K0	27	47.229	0.15	4	69.564	-53° 05'	31.03	0.12	4	69.564				8431	
8225	-1	2058	7.9	B9	27	47.411	0.05	2	70.588	-1° 22'	42.52	0.22	2	70.588				8432	
8226	-6	2617	7.6	A0	27	57.205	0.12	2	69.770	-6° 52'	16.98	0.01	2	69.770				8433	
8227	+2	1991	9.0	F0	27	59.098	0.41	2	70.644	+2° 16'	08.34	0.11	2	70.644				8434	
8228	-48	3841	9.6	G0	8	28	06.240	0.13	4	70.077	-49° 13'	41.93	0.15	4	70.077				1010
8229	-12	2558	8.4	A2	28	06.573	0.26	2	70.525	-12° 27'	53.62	0.01	2	70.525				8435	
8230	-61	1030	8.5	G5	28	13.098	0.10	4	69.072	-61° 42'	19.13	0.15	4	69.072				8436	
8231	-30	6368	9.2	G2	28	15.905	0.10	4	69.083	-30° 51'	15.92	0.31	4	69.083				8437	
8232	-24	7034	8.6	K0	28	16.249	0.04	4	69.598	-25° 08'	55.23	0.15	4	69.598				8438	
8233	-45	4185	8.9	K0	8	28	17.253	0.10	5	70.468	-45° 38'	33.76	0.16	4	70.560				1011
8234	-31	6163	9.0	K0	28	18.630	0.10	4	70.525	-31° 47'	00.79	0.14	4	70.525				8439	
8235	-11	2372	7.6	K0	28	23.834	0.04	2	70.644	-11° 37'	50.65	0.11	2	70.644			1979	8440	
8236p	-34	4905	9.0	K2	28	23.950	0.08	4	70.080	-35° 12'	10.93	0.13	4	70.080				8441	
8237	-16	2484	8.8	K0	28	32.577	0.06	2	70.602	-17° 17'	42.67	0.29	2	70.602				8442	
8238	+24	1940	5.73	F0	8	28	33.185	0.11	6	69.595	+24° 15'	03.24	0.13	6	69.595	2666	11655	1981	32666
8239	-42	4324	9.4	K0	28	44.550	0.23	4	69.630	-42° 44'	25.32	0.14	4	69.630				1012	
8240	+18	1963	5.57	M0	28	44.716	0.13	7	70.124	+18° 15'	52.21	0.14	6	69.992	2667	11659	1982	32667	
8241	-10	2550	8.3	K0	28	47.223	0.03	2	69.801	-10° 46'	05.40	0.05	2	69.801				8443	
8242	-40	4330	7.85	K5	28	50.186	0.07	4	69.594	-40° 19'	52.70	0.08	4	69.594		11667		1013	

8186 6.8m-7.9m, 0°3, 202°.

8193 A 6826AB, 9.0m-10.8m, 0°8, 22°.

8209 8.3m to 9.0m, G9+A8

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
8243	-19	2431	8.1	A2	8 28 50.316	0.16	4	69.029	-20 08 04.73	0.09	4	69.029				8444
8244p	-44	4477	6.49	B5	28 57.921	0.07	6	70.431	-44 34 04.99	0.18	6	70.431		11669		21011
8245	-23	7419	8.5	K0	29 00.234	0.09	4	68.660	-23 45 03.58	0.17	4	68.660				8445
8246	-18	2379	8.3	K0	29 01.210	0.11	2	70.581	-18 37 38.47	0.01	2	70.581				8446
8247	-8	2393	8.9	K0	29 05.115	0.29	2	71.009	-9 09 26.72	0.09	2	71.009				8447
8248	+0	2322	8.5	K0	8 29 05.798	0.01	2	71.499	-0 00 48.22	0.04	2	71.499				8448
8249	-3	2380	9.0	F8	29 17.585	0.14	4	71.048	-3 36 51.42	0.05	4	71.048				26488
8250	-8	2394	8.1	A0	29 20.114	0.07	2	71.506	-8 41 02.72	0.26	2	71.506				8449
8251	-58	1137	8.7	K0	29 20.720	0.07	4	69.027	-59 02 41.06	0.08	4	69.027				8450
8252	-47	4044	9.2	K0	29 28.039	0.11	4	69.639	-47 55 09.75	0.11	4	69.639				1014
8253	-75	505	9.5	K0	8 29 43.449	0.15	5	70.260	-76 07 37.33	0.20	5	70.260				19181
8253 SP					29 43.463	0.76	4	70.044	-76 07 37.00	0.24	4	70.044				19181
8254	-20	2579	8.7	K0	29 46.475	0.19	3	68.472	-20 37 56.46	0.10	4	68.669				8451
8255	+20	2109	5.52	K0	29 49.085	0.03	31	71.440	+20 36 43.73	0.05	28	71.399	321	11687	1985	30321
8256	+4	1997	8.07	A2	29 50.710	0.05	2	71.484	+3 50 38.88	0.16	2	71.484			1986	8452
8257	-27	5592	8.2	B9	8 29 58.631	0.18	4	69.134	-27 19 22.37	0.08	4	69.134				8453
8258	+2	1999	8.8	A3	30 08.108	0.23	2	70.510	+2 20 17.64	0.03	2	70.510				8454
8259	-43	4375	9.0	G5	30 11.439	0.10	4	69.654	-44 14 00.69	0.05	4	69.654				1015
8260	-0	2017	8.8	A3	30 17.143	0.23	2	70.591	-1 07 41.64	0.06	2	70.591				8455
8261	+10	1820	9.0	G5	30 19.115	0.06	4	69.680	+10 08 04.83	0.11	4	69.680				26491
8262	-3	2386	8.9	K2	8 30 21.946	0.04	2	69.756	-4 11 46.50	0.47	2	69.756				8456
8263	-55	1588	8.06	K0	30 24.364	0.17	4	69.093	-55 37 48.41	0.13	4	69.093		11708		8457
8264	-46	4274	7.96	K5	30 25.173	0.08	4	69.621	-47 09 25.61	0.14	4	69.621		11709		1016
8265	-4	2379	6.63	A2	30 41.871	0.01	2	70.658	-5 03 04.59	0.08	2	70.658		11714		8458
8266	-33	5154	8.1	K0	30 47.886	0.04	4	69.594	-33 23 16.23	0.11	4	69.594				8459
8267	-13	2589	8.7	K2	8 30 52.350	0.05	2	70.673	-13 27 00.52	0.22	2	70.673				8460
8268	-23	7460	8.7	K0	30 54.256	0.11	4	69.105	-23 27 12.46	0.09	4	69.105				8461
8269	-7	2527	8.4	K5	30 56.042	0.07	2	70.704	-7 44 33.41	0.17	2	70.704				8462
8270	-59	1056	8.8	M0	30 56.913	0.14	4	69.066	-60 13 10.79	0.10	4	69.066				8463
8271	-56	1696	7.96	G5	30 57.464	0.11	4	69.574	-56 27 46.93	0.23	4	69.574		11725		8465
8272	-21	2477	8.2	K2	8 30 57.490	0.15	4	69.508	-22 09 23.29	0.07	4	69.508				8464
8273	-2	2613	7.9	K5	31 00.652	0.26	2	71.587	-2 48 19.84	0.08	2	71.587		11728		8466
8274	-37	4842	7.8	K0	31 01.923	0.13	4	69.628	-38 00 13.99	0.10	4	69.628				8467
8275	-60	1143	9.3	G2	31 03.022	0.08	4	69.160	-61 00 25.67	0.24	4	69.160				8468
8276	-39	4474	8.9	K2	31 04.360	0.04	4	70.610	-39 46 34.07	0.35	4	70.610				8469
8277	-14	2572	8.2	A0	8 31 10.834	--	1	71.115	-15 01 55.54	--	1	71.115				8470
8278	-29	6352	8.3	G5	31 11.943	0.09	4	69.547	-29 47 06.53	0.09	4	69.547				8471
8279	-15	2494	6.64	K0	31 14.883	0.01	2	70.599	-15 56 16.20	0.10	2	70.599		11734		8472
8280	-48	3888	7.4	K5	31 23.298	0.22	4	70.010	-48 59 00.89	0.06	4	70.010				1018
8281	-5	2572	8.7	A2	31 26.625	--	1	71.905	-5 51 21.49	--	1	71.905				8473
8282	-65	963	9.1	G0	8 31 27.291	0.11	4	70.033	-65 29 51.63	0.16	4	70.033				19182
8283	-1	2074	5.61	A0	31 29.847	0.10	6	69.207	-1 58 46.49	0.12	6	69.207	2669	11743		32669
8284	-1	2075	8.0	G0	31 31.016	0.01	2	70.682	-1 23 42.78	0.20	2	70.682				8474
8285	-5	2574	7.9	K2	31 32.430	0.25	2	71.528	-6 18 35.74	0.23	2	71.528				8475
8286	-42	4374	9.2	K0	31 37.603	0.05	4	70.059	-42 40 47.91	0.12	4	70.059				1019
8287*	-19	2457	8.7	F0	8 31 43.236	0.35	2	71.540	-19 53 39.99	0.23	2	71.540				8476
8288	-24	7110	6.96	A2	31 52.438	0.14	4	68.611	-24 55 37.43	0.04	4	68.611		11750		8477
8289	-0	2024	7.48	G5	31 58.861	0.01	2	70.661	-0 33 13.42	0.01	2	70.661		11754		8478
8290	-34	4985	9.2	A8	32 04.145	0.19	5	70.666	-35 10 13.08	0.11	5	70.666				8479
8291	+1	2131	8.3	K0	32 10.012	0.04	2	71.450	+1 39 35.60	0.22	2	71.450				8480
8292	-20	2593	8.4	F2	8 32 11.944	0.10	3	69.074	-21 01 46.81	0.20	4	69.121				8481
8293	+0	2334	8.8	K0	32 12.888	0.07	2	70.682	+0 27 01.58	0.04	2	70.682				8482
8294	-27	5647	8.6	G5	32 13.986	0.09	4	69.527	-27 52 46.22	0.09	4	69.527				8483
8295	-57	1573	8.5	K2	32 14.446	0.12	5	70.484	-57 42 31.69	0.23	5	70.484				8484
8296	-68	801	8.3	K5	32 20.378	0.11	4	70.024	-68 41 33.28	0.17	4	70.024				19183
8297	-33	5195	8.0	K2	8 32 28.374	0.09	4	70.072	-34 01 14.91	0.05	4	70.072				8485
8298	-63	991	7.7	K2	32 31.674	0.25	5	70.671	-63 40 20.30	0.12	5	70.671				8486
8299	+0	2335	7.4	G5	32 35.152	0.16	2	71.535	+0 32 09.55	0.13	2	71.535				8487
8300	-85	169	8.5	F2	32 41.127	0.15	4	69.575	-86 12 38.20	0.10	4	69.575				19184
8300 SP					32 41.224	0.12	4	70.340	-86 12 37.40	0.11	4	70.340				19184
8301	-26	6208	8.6	A0	8 32 43.586	0.16	4	69.630	-26 19 23.54	0.12	4	69.630				8488
8302	-11	2399	8.6	G0	32 46.678	0.18	2	70.691	-11 52 47.37	0.04	2	70.691				8489
8303	+3	2014	6.48	K0	32 48.624	0.01	2	71.559	+2 55 00.32	0.04	2	71.559		11768		8490
8304	-46	4322	8.3	K0	32 49.198	0.05	5	70.685	-46 57 12.17	0.17	4	70.831				1020
8305	-36	4783	7.8	K5	32 52.859	0.08	4	69.673	-36 48 34.31	0.09	4	69.673				8491
8306	-66	876	8.7	K2	8 32 54.381	0.13	4	70.098	-66 51 05.20	0.28	4	70.098				19185
8307	-7	2540	5.61	A2p	33 01.744	0.08	6	69.659	-7 48 32.17	0.06	6	69.659	2672	11775		32672
8308	-18	2404	8.9	K5	33 03.332	0.05	2	70.751	-18 52 03.95	0.15	2	70.751				8492
8309	+24	1955	6.84	A0	33 05.326	0.08	6	70.286	+24 13 29.78	0.23	6	70.286	2673	11778	1996	32673
8310	-49	3646	4.87	K0	33 11.913	0.10	6	69.215	-49 46 15.70	0.08	6	69.215	2674	11783		32674
8311	-30	6506	7.9	K0	8 33 12.905	0.11	4	70.111	-31 06 43.80	0.09	4	70.111				8493
8312	-69	934	8.3	K5	33 20.249	0.09	4	69.150	-69 56 27.17	0.09	4	69.150				19186
8313	-88	81	9.2	K2	33 21.201	0.10	4	70.099	-88 26 57.28	0.23	4	70.099				19187
8313 SP					33 20.764	0.26	4	70.424	-88 26 57.16	0.27	4	70.424				19187
8314	-26	6225	5.88	A2	33 21.353	0.10	5	70.922	-26 40 11.77	0.13	5	70.922		11786		8494

8244 SDS, 10.7m, 3", 74°.

8287 9.7m-9.8m, 0", 287°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
8315	-30° 6509	9.0	G5	8 33 21.565	0.12	4	71.096	-30 46 28.08	0.10	4	71.096				8495
8316	-38 4639	7.9	K5	33 24.669	0.07	4	70.093	-39 04 47.30	0.01	4	70.093				8496
8317	-48 3920	9.0	K0	33 25.583	0.16	4	70.068	-48 24 06.74	0.06	4	70.068				1021
8318	-10 2575	7.8	M1	33 28.488	0.26	2	70.673	-11 07 02.78	0.39	2	70.673				8497
8319	-49 3653	8.2	K5	33 35.585	0.10	4	70.084	-49 34 10.32	0.17	4	70.084				1022
8320	-28 6276	7.6	K0	8 33 40.898	0.13	4	70.617	-28 18 15.91	0.08	4	70.617				8498
8321	-31 6295	8.2	K5	33 41.763	0.04	4	70.544	-32 02 23.55	0.11	4	70.544				8499
8322	+ 4 2001	8.9	K2	33 42.990	0.24	2	72.012	+ 4 07 54.87	0.43	2	72.012				8500
8323	-51 3099	7.53	K0	33 54.529	0.11	4	69.836	-51 38 47.75	0.10	4	69.836	11794			1023
8324	-83 238	8.6	A5	34 00.963	0.13	4	69.596	-83 55 08.85	0.22	4	69.596				19188
8324 SP				8 34 01.069	0.23	4	70.870	-83 55 08.74	0.27	4	70.870				19188
8325	-57 1590	5.40	B3	34 05.836	0.10	6	70.554	-58 03 02.97	0.18	6	70.554	11796			21012
8326	-41 4294	8.1	K0	34 13.551	0.05	4	71.162	-41 22 26.38	0.06	3	70.850				1024
8327	-35 4833	7.9	A0	34 14.571	0.07	4	70.671	-36 05 21.96	0.18	4	70.671				8501
8328	-51 3102	7.5	M1	34 14.618	0.20	4	69.671	-52 08 53.39	0.17	4	69.671				8502
8329	- 9 2595	7.52	K0	8 34 14.649	0.08	2	71.964	- 9 32 22.48	0.31	2	71.964	11800			8503
8330	-17 2576	8.6	K0	34 15.631	0.01	2	69.762	-17 50 51.65	0.00	2	69.762				8504
8331	+10 1837	5.98	A0	34 23.153	0.10	6	70.837	+ 9 49 49.81	0.13	6	70.837	2675	11807	2000	32675
8332	- 6 2658	8.7	K2	34 26.832	0.02	2	72.230	- 7 08 51.53	0.34	2	72.230				8505
8333	-43 4462	9.4	K2	34 33.240	0.12	4	70.326	-43 39 01.37	0.11	4	70.326				1025
8334	-45 4291	9.11	K0	8 34 39.411	0.08	5	70.963	-46 05 13.50	0.20	4	71.180	11811			1026
8335	-15 2520	8.1	K0	34 50.701	0.11	2	72.114	-15 50 40.13	0.12	2	72.114				8506
8336	-25 6334	7.7	K2	35 00.036	0.06	3	70.739	-25 53 52.30	0.09	4	70.370				8507
8337	+ 6 2001	4.18	A0	35 00.499	0.02	64	70.921	+ 5 52 45.36	0.05	61	70.891	1223	11823	2005	81223
8338	-23 7558	8.7	A0	35 09.367	0.08	4	70.344	-24 07 35.57	0.12	4	70.344				8508
8339	- 2 2637	8.7	K2	8 35 10.132	0.16	2	72.283	- 3 16 04.03	0.13	2	72.283				8509
8340	- 0 2034	8.6	K5	35 11.654	0.11	2	72.288	- 0 57 12.43	0.34	2	72.288				8510
8341	-37 4927	8.09	K5	35 14.847	0.17	4	70.212	-37 44 07.04	0.15	4	70.212	11833			8511
8342	+12 1878	8.8	F	35 26.564	0.06	4	73.219	+12 08 32.13	0.16	4	73.219				26496
8343	-12 2610	7.2	K0	35 30.944	0.08	3	72.418	-12 31 48.05	0.29	3	72.418				8512
8344	-34 5069	8.4	A5	8 35 31.100	0.08	4	70.184	-35 08 47.57	0.12	4	70.184				8513
8345	-25 6356	5.20	A0	35 43.899	0.04	6	71.823	-26 04 44.27	0.15	6	71.823	2676	11848		32676
8346	+ 1 2142	7.5	K0	35 46.058	0.07	2	72.268	+ 0 52 01.74	-	1	72.287				8514
8347	-63 1010	9.0	K5	35 50.556	0.33	4	69.709	-64 05 52.91	0.24	4	69.709				19189
8348	-42 4451	4.13	A5	35 53.040	0.05	20	70.338	-42 48 47.74	0.07	19	70.197	324	11852	2010	30324
8349	-50 3434	9.1	K0	8 35 54.204	0.07	4	70.936	-51 05 09.49	0.25	4	70.936				1027
8350	-79 327	7.06	K5	36 00.936	0.05	4	70.124	-79 59 04.09	0.15	4	70.124	11854			19190
8350 SP				36 00.906	0.19	4	70.253	-79 59 04.24	0.17	4	70.253	11854			19190
8351	-39 4596	7.9	K2	36 05.353	0.25	5	71.180	-40 11 51.34	0.14	5	71.180				1028
8352	-16 2534	8.5	G5	36 07.624	0.08	2	70.750	-16 49 38.52	0.09	2	70.750				8515
8353	+ 3 2026	4.54	K0	8 36 08.640	0.05	15	71.778	+ 3 31 05.38	0.08	14	71.816	1224	11856	2012	31224
8354	-44 4616	8.8	K0	36 12.842	0.06	4	70.677	-44 18 34.78	0.21	4	70.677				1029
8355	-78 364	8.6	K2	36 16.538	0.14	4	70.396	-79 02 19.47	0.10	4	70.396				19191
8355 SP				36 16.591	0.26	4	70.614	-79 02 19.97	0.11	4	70.614				19191
8356	-55 1643	8.8	G5	36 18.915	0.10	4	70.126	-56 05 09.73	0.26	4	70.126				8516
8357	-54 1717	7.48	K5	8 36 22.808	0.16	4	70.696	-54 49 05.64	0.19	4	70.696	11863			8517
8358	-71 719	8.1	K0	36 24.144	0.07	4	70.111	-71 29 04.04	0.10	4	70.111				19192
8359	- 8 2440	8.4	K0	36 24.757	0.24	2	72.097	- 8 22 46.51	0.06	2	72.097				8518
8360p	-19 2489	6.53	K5	36 24.963	0.11	4	71.580	-19 33 37.17	0.13	4	71.580	2678	11865		8519
8361f	-62 1058	5.38	G5	36 25.702	0.09	7	71.823	-62 40 38.04	0.15	6	71.779	2679	11867	2014	32679
8362	- 6 2671	7.4	A0	8 36 28.725	0.17	2	72.242	- 6 40 17.61	0.18	2	72.242				8520
8363	+ 2 2034	8.2	K0	36 29.668	0.08	3	72.091	+ 2 19 07.96	0.00	2	72.071				8521
8364	-14 2597	8.2	K5	36 35.655	0.06	3	71.801	-14 29 49.27	0.24	3	71.801				8522
8365	-34 5095	9.0	K2	36 38.570	0.08	4	70.163	-34 54 15.52	0.10	4	70.163				8523
8366	-82 267	8.7	G0	36 47.663	0.14	5	70.513	-82 26 26.92	0.16	5	70.513				19193
8366 SP				8 36 47.632	0.37	4	70.564	-82 26 26.03	0.23	4	70.564				19193
8367	-36 4863	8.1	K5	36 47.885	0.04	4	71.003	-36 46 42.53	0.09	4	71.003				8524
8368*	-33 5286	7.5	G5	36 48.466	0.11	4	70.634	-33 41 38.04	0.28	4	70.634				8525
8369	-24 7238	8.2	F2	36 49.746	0.11	4	69.645	-24 54 50.32	0.24	4	69.645				8526
8370	- 4 2410	8.0	K2	36 54.788	0.01	2	71.770	- 4 40 59.72	-	1	72.189				8527
8371	-28 6343	8.5	K0	8 36 55.718	0.16	4	69.993	-29 09 54.79	0.05	4	69.993				8528
8372	- 3 2427	8.2	K0	36 55.944	0.19	2	72.050	- 3 51 06.42	0.09	2	72.050				8529
8373	-47 4171	7.8	K2	37 06.258	0.09	4	70.606	-47 36 39.52	0.10	4	70.606				1030
8374	+ 4 2011	8.1	K0	37 09.111	0.07	2	72.070	+ 4 33 20.85	0.12	2	72.070				8530
8375	-17 2597	7.09	A2	37 12.227	0.12	2	69.766	-18 05 22.22	0.13	2	69.766	11885			8531
8376	-21 2538	8.3	K5	8 37 16.664	0.13	4	69.583	-21 44 54.86	0.08	4	69.583				8532
8377	- 9 2613	8.2	G5	37 18.554	0.04	2	71.999	-10 17 58.25	0.33	2	71.999				8533
8378	-53 1793	7.6	M0	37 23.729	0.15	4	69.562	-53 20 44.39	0.31	4	69.562				8534
8379	-30 6614	8.4	K5	37 30.085	0.11	4	69.143	-30 24 57.36	0.05	4	69.143				8535
8380	-69 943	8.0	K2	37 33.960	0.09	4	69.551	-69 29 14.85	0.07	4	69.551				19194
8381	+ 4 2014	8.8	K0	8 37 35.781	0.35	2	71.118	+ 4 34 39.37	0.32	2	71.118				8536
8382	-29 6544	5.04	G5	37 37.845	0.09	5	71.265	-29 22 57.57	0.13	5	71.265	2680	11907		32680
8383	-11 2420	5.15	K2	37 39.170	0.04	46	71.872	-12 17 51.09	0.06	46	71.892	325	11908	2022	30325
8384	-13 2638	8.3	K0	37 49.434	0.22	3	70.524	-13 41 28.52	0.48	2	71.143				8537
8385	- 1 2102	8.6	K5	37 49.714	-	1	72.077	- 1 26 23.38	-	1	72.077				8538

8360 A 6903, 9.6m, 4°3, 103°.
8361 SDS, 10.4m, 7°6, 237°.

8368 8.1m-8.6m, 0°5, 350°.

8390 A 6926AB, 9.0m-11.0m, 4°9, 328°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
8386	-22	2350	8.2	K0	8 37 52.106	0.11	4	69.087	-23 01 50.19	0.19	4	69.087				8539
8387	-39	4645	8.45	K0	38 00.208	0.11	4	70.828	-39 35 35.74	0.07	4	70.828		11918		8540
8388	-75	517	8.9	K0	38 03.582	0.08	5	70.531	-75 59 14.23	0.21	5	70.531				19195
8388	SP				38 03.640	0.33	4	69.455	-75 59 14.10	0.16	4	69.455				19195
8389	-1	2103	8.9	K2	38 04.040	0.22	2	71.703	-2 19 04.52	0.10	2	71.703				8541
8390*	+1	2147	9.0	F5	8 38 04.435	0.10	4	72.583	+0 57 49.78	0.17	4	72.583				26503
8391	-31	6394	8.3	K0	38 05.975	0.07	4	70.197	-32 05 44.00	0.10	4	70.197				8542
8392	-34	5128	4.04	G5	38 08.622	0.05	6	70.232	-35 07 48.30	0.09	6	70.232	2681	11923	2024	32681
8393	-20	2635	7.8	K2	38 14.605	0.08	4	68.651	-20 50 05.01	0.22	4	68.651				8543
8394	-3	2434	8.5	F2	38 16.566	0.20	2	70.779	-4 02 38.06	0.44	2	70.779				8544
8395	-11	2426	7.8	G5	8 38 20.809	0.17	3	71.839	-11 44 55.41	0.13	3	71.839		11927		8545
8396	-8	2452	6.48	A0	38 36.017	0.08	7	71.909	-8 52 23.72	0.06	7	71.909	2682	11938	2025	32682
8397	-72	725	8.7	K	38 40.440	0.15	4	70.078	-72 18 12.32	0.19	4	70.078				19196
8398	+1	2150	8.10	K2	38 41.815	0.39	2	71.598	+1 08 13.07	0.03	2	71.598			2026	8546
8399	-62	1066	7.9	K2	38 48.759	0.13	4	69.579	-62 20 56.78	0.09	4	69.579				8547
8400	-52	1583	3.68	B3	8 38 51.534	0.03	76	71.103	-52 44 36.82	0.04	72	71.070	1227	11943	2027	31227
8401	-53	1808	8.7	K0	38 52.573	0.17	4	70.557	-53 15 49.67	0.18	4	70.557				8548
8402	-69	946	5.26	A0	38 54.812	0.13	6	70.063	-70 12 30.17	0.09	6	70.063	2683	11947	2028	32683
8403	-46	4438	4.06	F5p	38 57.927	0.03	52	70.844	-46 28 12.20	0.04	48	70.792	1226	11951	2029	31226
8404	-18	2445	8.7	K2	39 03.906	0.04	2	71.613	-18 59 44.47	0.12	2	71.613				8549
8405	-18	2446	8.0	F5	8 39 05.499	0.11	2	70.692	-19 16 28.46	0.01	2	70.692				8550
8406	-26	6341	8.0	K2	39 06.337	0.16	4	69.070	-27 15 42.87	0.12	4	69.070				8551
8407	-37	5001	8.7	K2	39 10.669	0.08	4	69.639	-38 13 07.75	0.08	4	69.639				8552
8408	-57	1642	8.5	K0	39 12.004	0.09	4	70.641	-58 11 48.33	0.21	4	70.641				8553
8409	-50	3478	8.28	G5	39 14.756	0.17	4	70.680	-50 51 31.36	0.07	4	70.680		11956		1031
8410	-30	6657	9.0	K0	8 39 19.161	0.08	4	69.141	-31 13 34.87	0.07	4	69.141				8554
8411	-5	2609	8.3	M0	39 21.482	0.41	2	70.510	-5 25 51.98	0.13	2	70.510				8555
8412	-15	2554	4.98	K0	39 24.090	0.05	7	71.421	-15 45 47.48	0.08	6	71.504	2684	11959		32684
8413	-35	4948	7.8	F2	39 24.646	0.11	4	70.154	-35 46 31.20	0.06	4	70.154				8556
8414	-7	2581	8.6	K5	39 26.357	0.01	2	70.599	-8 05 08.66	0.08	2	70.599				8557
8415	-59	1080	4.42	B2	8 39 30.794	0.11	6	70.326	-59 34 55.60	0.13	6	70.326	2685	11964	2033	32685
8416*	-0	2045	8.9	F2	39 34.404	-	1	72.311	-0 57 43.00	-	1	72.311				26506
8417	-2	2659	7.5	M0	39 38.266	0.13	2	69.770	-2 52 12.46	0.16	2	69.770				8558
8418	+5	2035	7.68	G0	39 47.168	0.14	2	70.598	+4 45 35.01	0.22	2	70.598		11970		8559
8419	-12	2636	8.4	K5	39 59.362	0.00	2	70.641	-13 06 48.74	0.08	2	70.641				8560
8420	-67	979	7.9	K5	8 39 59.716	0.15	4	70.548	-67 38 28.04	0.07	4	70.548				19197
8421	-77	423	8.4	K0	40 17.985	0.05	4	70.121	-77 25 54.86	0.20	4	70.121				19198
8421	SP				40 17.974	0.12	4	69.962	-77 25 54.12	0.12	4	69.962				19198
8422	-4	2427	8.7	K0	40 19.426	0.01	2	70.674	-4 26 34.96	0.31	2	70.674				8561
8423	-15	2558	8.2	K0	40 21.017	0.06	2	69.728	-15 48 20.55	0.10	2	69.728				8562
8424	-64	929	8.3	M1	8 40 21.328	0.09	4	69.624	-64 25 22.78	0.15	4	69.624				19199
8425	-23	7663	8.1	K0	40 22.226	0.11	4	69.154	-24 01 53.58	0.12	4	69.154				8563
8426	-25	6462	8.4	K5	40 23.376	0.13	4	69.139	-26 07 55.19	0.13	4	69.139				8564
8427	+21	1895	4.73	A0	40 23.529	0.05	24	71.599	+21 38 57.85	0.07	24	71.599	1228	11982	2034	31228
8428	+13	1972	5.67	*	40 27.076	0.10	6	70.284	+12 51 40.98	0.08	6	70.284	2686	11983		32686
8429	-9	2630	6.82	A2	8 40 28.774	0.10	2	70.670	-9 37 29.84	0.22	2	70.670		11984		8565
8430	-56	1800	9.2	G2	40 29.934	0.13	4	70.181	-56 59 30.17	0.15	4	70.208				8566
8431	+3	2039	4.32	B3	40 36.668	0.07	8	70.792	+3 34 45.67	0.12	7	70.600	2687	11987	2036	32687
8432	-47	4251	5.48	B3	40 39.030	0.10	6	70.455	-47 55 08.01	0.13	6	70.455		11988		21013
8433*	-52	1599	7.8	G5	40 39.778	0.06	5	70.730	-52 34 34.91	0.13	4	71.079				8567
8434	-36	4939	7.5	K2	8 40 42.887	0.10	4	70.119	-37 12 07.69	0.12	4	70.119				8568
8435	-65	1004	8.6	K5	40 44.124	0.08	4	70.670	-66 05 05.67	0.08	4	70.670				19200
8436*	-11	2437	8.4	F5	40 45.054	0.06	2	71.596	-12 14 27.32	0.36	2	71.596				8569
8437	-59	1086	8.1	K0	40 45.490	0.22	5	70.746	-59 40 32.88	0.12	5	70.746				8570
8438	-34	5170	8.4	M0	40 49.378	0.13	4	70.105	-34 33 12.48	0.08	4	70.105				8571
8439	+17	1920	8.5	F8	8 40 50.615	0.12	2	71.680	+17 04 46.97	0.38	2	71.680				26511
8440	-0	2052	8.6	G5	40 55.686	0.05	4	71.968	-0 53 03.56	0.10	2	72.242				8572
8441	+4	2026	8.3	K0	40 57.814	0.25	2	71.726	+4 06 01.31	0.01	2	71.726				8573
8442	-52	1607	5.04	B5	40 59.290	0.09	5	70.395	-52 56 01.10	0.14	5	70.395		11997		21014
8443	+19	2090	8.0v	A0	41 04.835	0.09	4	72.392	+19 12 55.20	0.25	4	72.392		12001		26512
8444	-40	4538	9.3	K5	8 41 06.352	0.11	4	70.186	-40 58 39.93	0.09	4	70.186				1032
8445	-28	6436	8.1	K0	41 08.258	0.14	4	70.327	-28 29 59.89	0.13	4	70.327				8574
8446	-6	2707	8.8	A0	41 08.947	0.04	2	71.737	-7 02 18.94	0.30	2	71.737		12004		8575
8447	-45	4437	8.2	K2	41 11.962	0.06	4	70.203	-45 16 58.69	0.17	4	70.203				1033
8448	-33	5354	8.9	M1	41 14.617	0.12	4	70.546	-33 53 28.01	0.16	4	70.546				8576
8449	-79	338	8.5	K5	8 41 20.084	0.10	4	70.033	-79 48 14.72	0.08	4	70.033				19201
8449	SP				41 19.878	0.56	4	70.083	-79 48 14.80	0.21	4	70.083				19201
8450*	+3	2040	8.9	F8	41 23.826	0.14	5	72.390	+2 56 22.19	0.17	5	72.390				26513
8451	-46	4488	9.4	G5	41 27.739	0.21	4	70.505	-46 54 33.43	0.14	4	70.505				1034
8452	-14	2631	8.1	K0	41 32.530	0.01	2	70.585	-14 52 54.03	0.03	2	70.585				8577
8453	+3	2041	8.2	K0	8 41 33.353	0.40	2	71.644	+3 14 41.14	0.30	3	72.098				8578
8454	-32	5651	3.70	B2	41 34.862	0.03	72	71.005	-33 00 18.35	0.04	68	70.983	327	12018	2037	30327
8455	+16	1806	8.4	A2	41 36.578	0.24	2	71.725	+16 05 48.24	0.19	2	71.725				26515
8456	-39	4709	7.6	K5	41 40.292	0.16	4	70.583	-39 25 07.01	0.27	4	70.583				8579
8457	-8	2471	9.1	A0	41 42.132	0.26	3	72.229	-9 11 58.56	0.10	3	72.229				8580

8416 A 6941AB, 9.2m-9.4m, 0^m.2, 129°.

8428 A3+G.

8433 8.2m-9.2m, 0^m.2.8436 8.5m-8.6m, 0^m.2, 28°.

8443 8.0m to 10.1m.

8450 A 6960AB, 9.2m-10.0m, 0^m.2, 93°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
8458	-48	4053	9.0	K2	8 41 44.227	0.15	4	70.531	-48 31 37.38	0.03	4	70.531				1035
8459	+ 0	2372	8.6	A0	41 49.732	0.05	2	70.797	- 0 15 40.84	0.10	2	70.797				8581
8460	-73	525	7.06	A0	41 50.763	0.12	5	70.104	-73 26 02.20	0.55	5	70.104		12023		19202
8461	- 4	2435	8.5	A0	41 51.392	0.01	2	71.103	- 4 54 46.49	0.34	2	71.103				8582
8462	-51	3167	7.40	K0	41 53.589	0.12	4	69.623	-52 01 39.56	0.19	4	69.623		12025		1036
8463	-29	6672	8.1	F0	8 41 58.174	0.06	4	69.680	-30 03 29.35	0.26	4	69.680				8583
8464	- 1	2122	8.9	F8	41 59.066	0.07	2	71.017	- 2 11 55.27	0.15	2	71.017				8584
8465	+10	1864	5.58	A0p	42 02.246	0.11	7	72.017	+10 15 49.79	0.09	6	72.144	2688	12029		32688
8466	-19	2515	7.5	K0	42 03.313	0.17	4	70.127	-20 05 05.62	0.16	4	70.127				8585
8467	-49	3761	5.19	B2	42 06.314	0.08	5	71.428	-49 38 28.43	0.24	5	71.428	2689	12031		32689
8468	-17	2632	8.4	K2	8 42 07.295	0.21	2	71.100	-17 49 41.88	0.06	2	71.100				8586
8469	+ 2	2057	8.1	K0	42 14.321	0.10	2	69.758	- 1 53 26.75	0.41	2	69.758				8587
8470	-44	4748	9.1	K0	42 19.596	0.07	4	70.613	-44 27 06.06	0.24	4	70.613				1037
8471	-21	2573	8.0	K5	42 33.662	0.10	5	70.209	-22 06 56.21	0.12	5	70.209				8588
8472	-20	2667	6.13	A2	42 40.904	0.03	61	71.593	-20 59 07.44	0.04	58	71.563	1229	12052	2044	31229
8473	-43	4593	8.8	G5	8 42 42.379	0.19	4	70.644	-43 33 25.30	0.16	4	70.644				1038
8474	-35	5004	8.2	F0	42 43.478	0.08	4	70.556	-35 59 21.72	0.14	4	70.556				8589
8475	+ 0	2379	6.85	G5	42 49.381	0.16	3	71.483	+ 0 22 49.77	0.12	3	71.483		12055		8590
8476	- 3	2462	8.4	A0	42 53.643	0.17	2	71.701	- 3 29 55.78	0.36	2	71.701				8591
8477	-47	4311	7.69	K2	42 53.673	0.17	5	70.728	-47 48 13.02	0.13	5	70.728		12057		1039
8478	-67	987	9.0	G5	8 43 00.946	0.15	4	70.107	-67 40 13.07	0.14	4	70.107				19203
8479	-78	372	5.62	B9	43 04.242	0.03	64	70.917	-78 46 57.21	0.05	62	70.860	331	12063	2046	30331
8479 SP					43 04.255	0.12	21	70.712	-78 46 57.33	0.16	21	70.712	331	12063	2046	50331
8480*	-12	2664	8.7	F8	43 23.947	0.01	2	71.690	-12 28 50.13	0.06	2	71.690				8592
8481	-41	4460	7.4	K2	43 24.510	0.06	4	70.148	-41 41 45.84	0.07	4	70.148				1040
8482	-62	1086	8.2	G5	8 43 28.706	0.05	4	69.585	-62 20 30.34	0.14	4	69.585				8593
8483	- 1	2125	5.82	K0	43 30.371	0.17	2	70.622	- 1 51 56.64	0.40	2	70.622		12077		8594
8484	- 6	2719	8.2	K0	43 31.931	0.07	2	71.505	- 6 21 22.26	0.19	2	71.505				8595
8485	-49	3786	8.2	K0	43 40.272	0.13	5	71.484	-49 23 43.21	0.17	4	71.540				1041
8486	+29	1824	4.20	G5	43 40.466	0.03	111	71.387	+28 56 38.02	0.04	108	71.385	328	12083	2052	80328
8487	-10	2635	7.36	M3	8 43 45.319	0.01	2	71.535	-10 38 46.52	0.07	2	71.535		12087		8596
8488	-42	4591	8.3	K0	43 48.274	0.14	4	70.159	-43 08 44.87	0.21	4	70.159				1042
8489	-65	1013	6.02	A2	43 48.339	0.07	6	69.705	-65 38 36.54	0.14	6	69.705	2691	12090	2054	32691
8490	-65	1014	7.6	K0	43 57.090	0.08	4	69.173	-65 30 47.78	0.25	4	69.173				19204
8491	-50	3541	8.6	K5	43 57.732	0.09	4	69.628	-50 34 09.57	0.07	4	69.628				1043
8492	-26	6417	7.32	*	8 44 01.416	0.05	4	69.984	-26 25 45.00	0.06	4	69.984		12098	2057	8597
8493	-46	4544	9.6	K2	44 03.853	0.12	4	70.122	-46 40 30.71	0.05	4	70.122				1044
8494	-36	5007	7.8	K0	44 09.049	0.10	4	70.142	-36 49 52.50	0.19	4	70.142				8598
8495	- 9	2652	8.8	G5	44 10.794	0.10	2	70.762	-10 02 32.35	0.04	2	70.762				8599
8496	-31	6514	8.4	K0	44 12.836	0.09	4	69.151	-31 17 15.99	0.07	4	69.151				8600
8497	-57	1690	8.5	K0	8 44 14.220	0.05	4	70.093	-57 27 52.63	0.13	4	70.093				8601
8498	+ 1	2165	8.7	A2	44 14.918	0.22	2	70.587	- 1 16 08.05	0.39	2	70.587				8602
8499	- 7	2609	8.7	K0	44 15.125	0.12	2	70.605	- 8 17 04.78	0.06	2	70.605				8603
8500	-58	1208	8.7	K2	44 16.140	0.05	5	70.446	-58 16 27.35	0.17	4	70.273				8604
8501	-54	1802	8.1	K0	44 16.823	0.15	4	70.072	-55 02 23.80	0.19	4	70.072				8605
8502	-73	528	7.59	A0	8 44 25.503	0.18	4	70.530	-74 07 10.86	0.22	4	70.530		12111		19205
8503	-37	5099	8.9	K0	44 27.788	0.08	4	69.641	-38 07 16.68	0.14	4	69.641				8606
8504	-29	6734	7.59	K0	44 29.787	0.08	4	69.115	-29 34 27.45	0.16	4	69.115		12115		8607
8505	+ 4	2040	8.2	B9	44 32.829	0.01	2	70.536	+ 4 32 32.18	0.02	2	70.536				8608
8506	-13	2676	8.5	G0	44 36.731	0.20	2	69.764	-13 56 27.54	0.12	2	69.764				8609
8507	-35	5042	8.9	A5	8 44 40.080	0.13	4	70.092	-35 24 15.51	0.20	4	70.092				8610
8508	- 1	2130	5.22	A0	44 42.890	0.03	6	69.570	- 1 42 45.40	0.15	6	69.570	2693	12122	2059	32693
8509	-45	4526	5.54	B5	44 48.380	0.10	6	70.454	-45 43 42.22	0.09	6	70.454		12125		21015
8510	-31	6536	9.0	K5	44 52.467	0.10	4	70.350	-32 03 02.74	0.21	4	70.350				8611
8511	-52	1651	8.7	K2	44 53.276	0.13	4	68.990	-52 20 22.21	0.24	4	68.990				8612
8512	-41	4485	8.7	K0	8 45 00.857	0.11	3	70.095	-42 03 40.34	0.19	3	70.095				1045
8513	- 3	2473	8.2	K2	45 03.396	0.10	2	70.680	- 3 46 11.79	0.09	2	70.680				8613
8514	-15	2591	8.5	A0	45 06.139	0.15	2	69.706	-15 36 28.06	0.08	2	69.706				8614
8515	-30	6800	8.5	K0	45 08.655	0.16	4	69.104	-30 17 25.23	0.05	4	69.104				8615
8516	-74	538	6.56	K2	45 12.707	0.06	7	69.770	-74 36 16.34	0.09	6	69.578	2694	12133		32694
8516 SP					8 45 12.631	0.08	31	71.415	-74 36 16.25	0.14	30	71.447	2694	12133		52694
8517	-26	6446	8.6	K0	45 13.304	0.13	4	69.593	-26 52 00.67	0.09	4	69.593				8616
8518	-18	2481	8.6	K0	45 17.376	0.42	2	71.588	-18 31 31.98	0.06	2	71.588				8617
8519	+ 3	2055	8.8	F0	45 23.235	0.04	2	71.624	+ 2 40 39.07	0.19	2	71.624				8618
8520	-56	1865	4.63	B3	45 24.935	0.09	6	68.963	-56 35 07.07	0.10	6	68.963	2695	12138		32695
8521	-20	2682	8.4	K2	8 45 26.376	0.10	4	69.124	-20 36 14.08	0.14	4	69.124				8619
8522	+ 4	2043	8.8	A3	45 31.603	0.14	3	72.065	+ 4 31 31.72	0.08	3	72.065				8620
8523	-32	5724	8.5	K5	45 37.570	0.07	4	69.640	-33 07 55.75	0.06	4	69.640				8621
8524	-42	4624	8.26	K0	45 40.049	0.09	4	70.066	-42 35 01.69	0.10	4	70.066		12144		1046
8525	+ 1	2173	8.0	K2	45 43.975	0.11	2	71.534	+ 0 44 25.81	0.24	2	71.534				8622
8526*	-54	1816	8.7	K0	8 45 45.855	0.08	4	70.747	-54 36 27.67	0.09	4	70.747				8623
8527	- 1	2136	8.0	G5	45 54.599	0.05	2	71.538	- 2 20 06.96	0.22	2	71.538				8624
8528	-60	1194	9.3	G8	45 56.899	0.12	4	70.031	-61 00 49.70	0.14	4	70.031				8625
8529*	+ 3	2058	8.8	F5	45 59.215	0.07	4	69.700	+ 3 15 13.14	0.09	4	69.700				26522
8530*	+ 3	2059	8.7	F8	46 00.580	0.04	5	70.295	+ 2 47 44.96	0.09	4	70.139				26523

8480 9.4m-10.4m, 1°8, 333°.

8492 K0+A3.

8526 9.0m-10.8m, 0°6, 40°.

8529 A 7009AB, 9.4m-10.0m, 0°6, 224°.

8530 A 7010AB, 9.1m-9.8m, 0°1, 58°.

CATALOG OF 23,001 STARS FOR 1950.0

353

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
8531	- 0	2069	6.56	K0	8 46 04.635	0.06	2	71.498	- 0 51 32.93	0.05	2	71.498		12159		8626
8532	-28	6562	6.82	M0	46 08.007	0.01	4	69.671	-28 27 11.55	0.11	4	69.671		12161		8627
8533	-36	5041	9.0	K0	46 12.009	0.15	4	70.124	-37 02 57.49	0.08	4	70.124				8628
8534	-76	543	8.9	K5	46 16.051	0.07	4	69.611	-76 38 33.38	0.12	4	69.611				19206
8534	SP				46 15.957	0.15	4	70.450	-76 38 33.35	0.35	4	70.450				19206
8535	-30	6832	9.1	K2	8 46 31.027	0.06	3	69.778	-30 35 51.77	0.03	3	69.778				8629
8536	-24	7431	8.4	K5	46 32.588	0.10	4	70.723	-25 15 33.06	0.02	4	70.723				8630
8537	- 4	2461	7.5	K0	46 34.011	0.12	2	70.609	- 5 03 13.16	0.52	2	70.609				8631
8538	-75	536	8.7	F8	46 37.727	0.03	4	69.501	-75 42 41.24	0.23	4	69.501				19207
8538	SP				46 37.583	0.18	4	70.516	-75 42 40.90	0.35	4	70.516				19207
8539	-10	2650	8.6	F5	8 46 40.744	0.10	2	70.734	-10 40 50.89	0.32	2	70.734				8633
8540	-22	2407	8.9	A0	46 40.753	0.12	4	69.272	-22 41 16.80	0.09	4	69.272				8632
8541	-56	1877	8.1	K0	46 46.395	0.24	4	69.105	-56 30 22.10	0.20	4	69.105				8634
8542	- 2	2699	5.19	B9	46 50.929	0.02	70	71.655	- 3 15 23.39	0.03	69	71.634	1230	12172	2067	31230
8543	-48	4120	7.8	K0	47 00.650	0.06	4	69.609	-49 02 33.17	0.06	4	69.609				1047
8544	+ 2	2072	6.91	B9	8 47 01.884	0.15	2	69.713	+ 1 40 08.42	0.15	2	69.713		12176		8635
8545	-49	3843	8.8	A0	47 09.493	0.07	4	70.069	-49 31 19.87	0.09	4	70.069				1048
8546	-34	5289	8.8	K2	47 11.231	0.06	4	70.044	-35 12 22.64	0.20	4	70.044				8636
8547	- 5	2642	7.2	G5	47 14.198	0.19	2	70.708	- 5 30 27.62	0.20	2	70.708				8637
8548	+ 2	2073	7.31	G5	47 18.484	0.04	2	70.825	+ 2 33 01.03	0.03	2	70.825		12185		8638
8549	- 1	2140	9.0	K0	8 47 20.802	0.01	2	72.112	- 1 29 58.69	0.11	2	72.112				8639
8550	-62	1102	8.0	K0	47 25.423	0.10	4	69.127	-63 14 36.97	0.19	4	69.127				8640
8551	-31	6581	9.3	K5	47 27.846	0.15	4	69.160	-31 55 00.45	0.09	4	69.160				8641
8552	-59	1135	8.0	K0	47 30.987	0.17	4	69.683	-59 45 59.11	0.12	4	69.683				8642
8553	-40	4642	8.5	K5	47 33.641	0.17	4	70.120	-40 44 59.00	0.24	4	70.120				1049
8554	-60	1207	8.7	A2	8 47 34.732	0.13	4	70.126	-60 27 06.25	0.08	4	70.126				8643
8555	-18	2497	8.8	F8	47 37.122	0.13	2	72.059	-19 01 43.39	0.08	2	72.059				8644
8556	-78	387	9.1	G0	47 39.400	0.19	5	70.373	-78 40 29.43	0.27	4	70.443				19208
8556	SP				47 39.374	0.06	4	70.618	-78 40 29.91	0.23	4	70.618				19208
8557	-16	2600	8.4	K2	47 41.216	0.42	2	70.714	-17 03 08.15	0.41	2	70.714				8645
8558	-34	5296	8.9	K5	8 47 41.242	0.09	4	70.109	-34 39 46.87	0.18	4	70.109				8646
8559	-56	1892	8.4	K0	47 46.651	0.12	4	70.560	-57 02 49.70	0.24	4	70.560				8647
8560	-23	7797	8.0	K2	47 46.950	0.19	5	70.118	-23 45 55.99	0.15	5	70.118				8648
8561	-49	3856	8.4	K0	47 47.601	0.12	4	70.041	-50 07 14.17	0.12	4	70.041				1050
8562	-32	5770	5.23	G5	47 49.493	0.12	5	69.681	-32 35 34.99	0.09	5	69.681	2696	12195		32696
8563	-47	4399	8.4	K2	8 47 51.475	0.11	4	70.126	-48 09 19.63	0.11	4	70.126				1051
8564	-68	845	8.53	K2	47 51.808	0.03	5	70.317	-68 28 44.96	0.05	4	70.563		12197		19209
8565	- 3	2486	6.99	K0	47 54.388	0.37	2	70.982	- 4 00 33.00	0.18	2	70.982		12199	2070	8649
8566	-38	4925	6.30	A2	47 58.894	0.10	7	71.097	-38 57 17.44	0.13	6	71.071	2697	12203	2072	32697
8567	-69	966	8.1	K2	48 02.375	0.08	4	70.153	-70 13 50.35	0.20	4	70.153				19210
8568	-44	4861	5.02	A2	8 48 03.778	0.06	7	70.631	-45 07 15.27	0.20	6	70.381	2698	12204	2073	32698
8569	- 2	2707	8.9	K0	48 04.073	0.12	2	71.646	- 2 39 38.66	0.09	2	71.646				8650
8570	-14	2669	7.8	A2	48 07.362	0.14	3	71.623	-14 25 33.51	0.11	3	71.623			2074	8651
8571	+15	1917	6.29	G0	48 14.325	0.12	6	69.314	+15 32 15.70	0.11	6	69.314	2699	12211	2075	32699
8572	-36	5077	7.7	K0	48 15.769	0.10	4	70.595	-36 29 16.11	0.07	4	70.595				8652
8573	-45	4602	9.4	G8	8 48 19.252	0.07	5	70.989	-45 30 27.10	0.13	4	70.921				1052
8574	- 6	2740	8.8	F0	48 19.911	0.02	2	71.742	- 6 52 34.62	0.45	2	71.742				8653
8575	-27	5984	8.1	K5	48 21.129	0.06	5	70.400	-28 12 09.00	0.13	5	70.400				8654
8576	-27	5986	4.19	K2	48 24.296	0.02	148	71.182	-27 31 22.62	0.03	143	71.170	332	12216	2077	80332
8577	-15	2607	8.3	A0	48 28.490	0.05	2	70.684	-15 51 46.25	0.27	2	70.684				8655
8578	-44	4875	7.48	G5	8 48 33.989	0.12	4	70.162	-44 32 01.03	0.14	4	70.162		12220		1053
8579	-25	6636	7.6	G5	48 37.576	0.19	3	69.982	-25 55 49.98	0.11	3	69.982				8656
8580	-32	5780	8.3	K2	48 40.313	0.03	4	70.516	-32 52 40.48	0.19	4	70.516				8657
8581	- 1	2147	9.0	F8	48 52.491	0.22	2	70.678	- 1 25 04.62	0.34	2	70.678				8658
8582	- 8	2504	7.7	K2	48 54.027	0.22	2	70.576	- 8 56 05.29	0.09	2	70.576				8659
8583	-51	3267	7.46	K2	8 48 55.407	0.07	4	69.161	-51 42 34.25	0.14	4	69.161		12229		1054
8584	+ 4	2059	8.7	K5	49 11.400	0.13	2	69.696	+ 4 28 11.68	0.02	2	69.696				8660
8585	-80	302	8.4	K5	49 17.197	0.12	4	69.999	-80 56 13.17	0.13	4	69.999				19211
8585	SP				49 17.060	0.19	4	70.318	-80 56 12.92	0.44	4	70.318				19211
8586	+ 3	2076	8.8	F5	49 19.840	0.11	2	70.600	+ 3 12 46.65	0.40	2	70.600				8661
8587	+17	1963	8.8	F8	8 49 41.480	0.15	4	69.646	+16 40 13.28	0.11	4	69.646				26534
8588	-46	4682	8.2	M0	49 48.919	0.08	4	70.054	-46 21 08.90	0.07	4	70.054				1055
8589	-27	6008	7.65	F0	49 50.684	0.11	4	69.602	-27 27 09.93	0.12	4	69.602		12251		8662
8590	-39	4878	8.6	K0	49 53.452	0.06	4	70.047	-39 48 49.24	0.05	4	70.047				8663
8591	-12	2713	8.8	G5	49 54.523	0.25	3	71.043	-13 09 24.31	0.13	3	71.043				8664
8592	-12	2714	6.88	G0	8 49 57.766	0.05	4	71.535	-12 37 07.65	0.20	3	71.372	2703	12254		8665
8593	- 7	2641	8.2	G5	49 59.176	0.04	2	70.572	- 7 32 30.99	0.16	2	70.572				8666
8594	- 9	2679	8.6	A2	50 04.212	0.04	2	70.628	- 9 45 50.62	0.01	2	70.628				8667
8595	-38	4963	8.2	K5	50 07.962	0.04	4	69.680	-38 31 10.53	0.13	4	69.680				8668
8596	-52	1720	9.1	K2	50 09.309	0.09	5	69.890	-53 02 20.26	0.24	4	70.029				8669
8597	-54	1877	9.1	A0	8 50 09.905	0.11	4	69.087	-54 29 45.22	0.10	4	69.087				8670
8598	-20	2703	8.3	K2	50 10.710	0.08	4	69.137	-21 18 11.47	0.19	4	69.137				8671
8599	+ 0	2412	8.9	A0	50 23.870	0.22	2	70.603	+ 0 01 52.00	0.14	2	70.603				8672
8600	-11	2483	7.8	G5	50 28.609	0.22	2	69.651	-11 31 42.22	0.12	2	69.651				8673
8601	-29	6880	7.5	K0	50 33.122	0.16	4	69.121	-29 48 02.94	0.21	4	69.121				8674

8578 SDS, 11.8m, 3"3, 217°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
8602	-66° 931	8.2	G5	8 50 42.331	0.09	4	69.624	-66° 47' 38.66	0.24	4	69.624				19212
8603	-51 3295	9.0	K5	50 43.716	0.11	4	69.639	-51 32 50.92	0.17	4	69.639				1056
8604	-40 4693	7.65	K0	50 50.129	0.10	4	70.051	-40 47 37.69	0.08	4	70.051	12273			1057
8605	-44 4915	9.2	G8	50 52.907	0.14	4	70.131	-45 06 03.81	0.09	4	70.131				1058
8606	-40 4695	8.01	K5	50 56.994	0.08	4	70.148	-41 14 26.34	0.14	4	70.148	12276			1059
8607	+ 2 2084	8.3	K2	8 50 58.676	0.01	2	70.650	+ 2 06 10.55	0.54	2	70.650				8675
8608	-47 4460	6.11	B3	50 59.723	0.10	6	70.445	-48 10 09.89	0.11	6	70.445	12279	2090		21016
8609	-14 2691	8.5	K0	51 02.896	0.04	2	70.585	-15 11 43.60	0.13	2	70.585				8676
8610	-43 4726	8.3	K0	51 07.185	0.07	4	70.147	-43 33 48.08	0.13	4	70.147				1060
8611	-36 5134	9.0	K5	51 08.515	0.08	4	70.797	-37 10 56.30	0.18	4	70.797				8677
8612	-24 7513	8.5	K0	8 51 08.648	0.03	4	69.591	-25 03 24.94	0.10	4	69.591				8678
8613	-22 2434	8.5	A0	51 24.449	0.17	3	70.100	-22 50 31.64	0.24	3	70.100				8679
8614	-0 2087	8.4	K2	51 25.548	0.10	2	70.554	-0 25 17.55	0.09	2	70.554				8680
8615	-55 1827	8.1	K0	51 25.700	0.09	4	69.576	-55 48 06.93	0.12	4	69.576				8681
8616	-16 2626	8.6	F0	51 26.147	0.08	3	72.032	-17 01 40.60	0.85	3	72.032				8682
8617	-58 1258	8.4	G5	8 51 35.340	0.10	4	70.092	-58 19 36.86	0.07	4	70.092				8683
8618	-64 963	8.4	G5	51 38.506	0.09	4	69.598	-64 33 55.62	0.06	4	69.598				19213
8619	-63 1056	7.8	K2	51 38.659	0.07	4	69.644	-63 24 57.18	0.03	4	69.644				8684
8620	-19 2558	7.6	G5	51 40.968	0.16	4	69.118	-20 14 21.23	0.13	4	69.118				8685
8621	-26 6554	8.3	G5	51 48.368	0.13	4	69.675	-26 19 30.75	0.15	4	69.675				8686
8622	-68 859	8.18	K5	8 51 50.058	0.14	4	70.103	-68 32 37.11	0.19	4	70.103	12306			19214
8623	-47 4475	9.4	G0	51 51.249	0.10	4	70.680	-48 12 37.02	0.24	4	70.680				1061
8624	-8 2520	8.7	K0	51 56.915	0.14	2	70.601	-9 00 51.29	0.05	2	70.601				8687
8625	-45 4679	8.7	G8	51 57.505	0.04	4	70.157	-46 09 54.47	0.28	4	70.157				1062
8626	-35 5160	8.5	K5	52 00.881	0.07	4	70.101	-35 17 56.25	0.08	4	70.101				8688
8627	-30 6950	8.1	K2	8 52 01.993	0.08	4	69.691	-31 03 11.57	0.20	4	69.691				8689
8628	-4 2491	8.4	A5	52 02.154	0.07	2	70.647	-5 06 14.66	0.14	2	70.647				8690
8629	+ 1 2199	8.7	G5	52 06.095	0.20	3	71.231	+ 1 08 40.95	0.04	2	71.216				8691
8630	-64 966	8.5	K2	52 07.179	0.05	4	69.587	-65 16 45.88	0.09	4	69.587				19215
8631	-52 1747	9.1	A0	52 09.001	0.11	5	69.479	-52 21 37.08	0.25	4	69.516				8692
8632	-42 4766	8.2	K5	8 52 18.725	0.14	4	70.568	-43 13 48.27	0.11	4	70.568				1063
8633	+ 4 2074	8.2	G0	52 20.687	0.22	3	72.095	+ 4 20 18.58	0.13	3	72.095				8693
8634	-3 2506	6.82	A2	52 27.574	0.14	2	71.695	-3 21 51.67	0.23	2	71.695	12321			8694
8635	+ 3 2093	8.2	K0	52 34.537	0.01	2	71.547	+ 2 49 13.23	0.18	2	71.547				8695
8636	-3 2509	8.2	A0	52 35.213	0.12	3	72.110	-3 43 18.69	0.11	3	72.110				8696
8637	+28 1666	5.25	G5	8 52 40.187	0.10	6	71.183	+28 07 10.09	0.10	6	71.183	2705	12326		32705
8638	-18 2516	8.7	K5	52 40.552	0.11	2	70.684	-19 05 49.07	0.19	2	70.684				8697
8639	+ 6 2060	3.30	K0	52 44.951	0.03	58	71.226	+ 6 08 13.66	0.05	58	71.226	334	12327	2096	30334
8640	-47 4496	8.6	K0	52 46.053	0.07	4	70.104	-47 30 04.88	0.04	4	70.104				1064
8641	-35 5173	8.0	K2	52 46.159	0.05	5	70.863	-35 18 41.79	0.13	4	70.544				8698
8642*	-39 4937	7.9	K0	8 52 46.696	0.08	4	69.643	-39 17 29.22	0.14	4	69.643				8699
8643	-37 5253	7.8	K5	52 54.055	0.12	4	70.084	-38 12 47.11	0.16	4	70.084				8700
8644	-17 2691	5.90	K0	52 54.528	0.03	72	71.193	-18 02 58.44	0.04	69	71.171	1231	12331	2097	31231
8645	-71 762	9.2	K5	53 02.810	0.06	4	69.057	-71 46 41.04	0.15	4	69.057				19216
8646	-32 5859	8.4	F2	53 03.030	0.06	4	69.640	-33 13 58.55	0.10	4	69.640				8701
8647	-13 2713	7.7	K5	8 53 06.364	0.24	2	69.756	-14 12 50.59	0.29	2	69.756				8702
8648	-2 2737	7.05	K0	53 09.159	0.14	2	70.670	-2 35 56.33	0.05	2	70.670	12337			8703
8649	-33 5567	8.8	--	53 12.358	0.10	4	70.734	-34 16 41.10	0.29	4	70.734				8704
8650	-30 6980	8.1	K2	53 16.908	0.15	4	68.698	-30 49 41.52	0.13	4	68.698				8705
8651	-35 5186	8.9	K0	53 17.339	0.09	4	70.131	-36 14 41.48	0.16	4	70.131				8706
8652	-5 2668	8.3	K0	8 53 35.838	0.11	2	70.510	-6 04 46.50	0.20	2	70.510				8707
8653	-31 6702	8.6	K0	53 39.079	0.18	4	69.594	-31 59 14.91	0.25	4	69.594				8708
8654	-23 7902	6.47	A3	53 43.472	0.15	7	71.616	-23 37 34.66	0.07	6	71.677	2707	12352		32707
8655	-60 1243	3.98	B8	53 54.855	0.03	76	70.967	-60 27 10.32	0.04	76	70.967	336	12359	2102	30336
8656	-10 2697	8.3	K5	54 07.842	0.06	2	69.669	-10 54 18.73	0.09	2	69.669				8709
8657	-1 2163	8.6	A2	8 54 09.655	0.10	2	69.696	-2 10 54.43	0.12	2	69.696				8710
8658	+ 0 2430	8.0	K2	54 11.375	0.38	2	70.547	+ 0 34 58.84	0.30	2	70.547				8711
8659	+22 2029	7.01	G5	54 11.970	0.22	5	71.977	+22 03 12.55	0.16	5	71.977	2708	12362	2104	32708
8660	-28 6731	8.1	K0	54 12.316	0.06	4	68.710	-29 15 35.21	0.06	4	68.710				8712
8661	-7 2669	8.7	K2	54 22.480	0.02	2	70.620	-7 59 05.39	0.11	2	70.620				8713
8662	-36 5192	6.83	G0	8 54 22.853	0.21	6	71.480	-36 55 46.64	0.14	5	71.349	2709	12369	2105	32709
8663	-74 550	7.42	K2	54 24.765	0.08	4	70.029	-74 41 36.07	0.06	4	70.029	12371			19217
8664	+ 3 2097	9.0	K2	54 26.405	0.18	2	70.598	+ 3 06 02.66	0.18	2	70.598				8714
8665	-17 2696	8.1	K0	54 32.369	0.01	2	71.452	-17 50 30.23	0.18	2	71.452				8715
8666	-9 2696	8.7	K2	54 36.164	0.23	2	71.570	-9 25 39.97	0.17	2	71.570				8716
8667	-12 2738	8.6	K2	8 54 36.826	0.16	2	71.592	-12 37 31.91	0.21	2	71.592				8717
8668	-66 943	7.8	K0	54 37.631	0.17	4	70.188	-67 04 23.02	0.10	4	70.188				19218
8669	-23 7917	8.5	K5	54 37.883	0.08	4	68.614	-24 14 58.05	0.15	4	68.614				8718
8670	-0 2094	8.6	G5	54 37.920	0.02	2	71.599	-0 19 29.69	0.27	2	71.599				8719
8671	+ 1 2210	8.0	G5	54 39.639	0.11	2	71.528	+ 0 43 43.52	0.17	2	71.528				8720
8672p	-58 1292	8.5	G5	8 54 39.859	0.39	5	70.959	-59 13 55.39	0.14	5	70.959				8721
8673	-55 1853	7.86	K0	54 47.485	0.17	5	70.990	-55 20 07.45	0.15	4	70.706	12379			8722
8674	-39 4987	8.7	K5	54 53.390	0.14	4	69.532	-39 26 54.93	0.13	4	69.532				8723
8675	+ 1 2211	8.9	A0	54 55.376	0.01	2	70.616	+ 1 34 40.91	0.11	2	70.616				8724
8676	+ 9 2093	6.32	K0	55 00.272	0.08	7	70.664	+ 9 34 53.39	0.11	6	70.621	2710	12389		32710

8642 8.1m-10.3m, 0°7', 238°.

8672 SDS, 11.6m, 3°1', 128°.

CATALOG OF 23,001 STARS FOR 1950.0

355

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
8677	- 6	2774	8.3	A0	8 55 03.851	- -	1	72.031	- 7 13 01.19	- -	1	72.031				8725
8678	- 9	2701	7.6	K0	55 05.078	0.10	2	71.484	- 9 53 52.74	0.05	2	71.484				8726
8679	-61	1121	9.0	K0	55 05.644	0.16	5	70.773	-62 01 40.05	0.10	4	71.133				8727
8680	-69	982	8.8	K0	55 09.009	0.07	4	70.611	-69 54 27.76	0.25	4	70.611				19219
8681	+ 3	2103	8.7	K0	55 12.017	0.05	3	71.712	+ 3 37 46.47	0.04	3	71.712				8728
8682	-61	1125	8.2	K2	8 55 20.954	0.13	4	70.105	-61 41 05.56	0.10	4	70.105				8729
8683	-49	3994	7.08	K0	55 21.215	0.06	4	69.535	-49 29 15.18	0.08	4	69.535	12394			1065
8684	-49	3995	8.1	K2	55 21.418	0.12	4	70.193	-50 09 47.60	0.14	4	70.193				1066
8685	-59	1192	8.8	K2	55 24.708	0.22	4	70.641	-60 07 48.40	0.09	4	70.641				8730
8686	+18	2090	6.56	A0	55 28.660	0.10	6	70.303	+18 30 09.32	0.16	6	70.303	2711	12396		32711
8687	- 4	2503	6.57	F2	8 55 28.763	0.11	2	71.561	- 4 39 54.12	0.04	2	71.561		12397		8731
8688	+ 2	2112	6.50	A0	55 33.156	0.07	6	70.264	+ 1 44 08.70	0.06	6	70.264	2712	12398		32712
8689	- 3	2520	8.2	K2	55 34.164	0.04	2	70.614	+ 3 23 01.74	0.02	2	70.614				8732
8690	+ 2	2114	8.2	K0	55 43.857	0.02	2	69.698	+ 2 16 02.22	0.08	2	69.698				8733
8691	-58	1301	5.29	B3	55 45.012	0.04	70	71.328	-59 02 08.36	0.04	67	71.320	1233	12405	2111	31233
8692	+12	1948	4.27	A3	8 55 45.281	0.04	11	71.443	+12 03 08.17	0.11	11	71.443	337	12406	2112	30337
8693	+14	2007	8.5	K0	56 00.259	0.05	4	70.911	+14 25 27.59	0.08	4	70.911				26550
8694	-37	5320	8.3	K0	56 01.479	0.13	4	69.572	-37 31 20.82	0.10	4	69.572				8734
8695	-25	6754	8.4	A0	56 04.522	0.09	4	68.641	-26 09 19.49	0.04	4	68.641				8735
8696	+ 4	2088	8.1	B5	56 22.459	0.04	2	70.516	+ 3 51 03.41	0.24	2	70.516				8736
8697	-15	2656	5.92	G0	8 56 23.400	0.12	6	69.320	-15 56 23.41	0.08	6	69.320	2713	12415		32713
8698	-16	2653	7.17	K0	56 26.881	0.14	2	69.665	-16 33 13.58	0.10	2	69.665		12416		8737
8699	-46	4801	8.4	K5	56 30.895	0.03	4	69.585	-46 22 56.78	0.05	4	69.585				1067
8700	-15	2658	6.92	K2	56 35.243	0.17	2	69.666	-15 47 24.12	0.02	2	69.666		12418		8738
8701	-26	6621	8.3	K5	56 38.463	0.11	4	68.609	-27 12 51.53	0.16	4	68.609				8739
8702	-63	1075	8.7	F0	8 56 44.468	0.12	4	69.543	-63 30 33.65	0.09	4	69.543				8740
8703	-17	2706	8.6	K5	56 45.232	0.16	2	69.710	-17 34 00.03	0.06	2	69.710				8741
8704	-71	773	8.4	F2	56 50.978	0.16	4	69.644	-72 12 44.94	0.07	4	69.644				19220
8705	-50	3727	7.98	K5	56 55.409	0.16	4	69.589	-50 36 44.61	0.09	4	69.589	12425			1068
8706*	-70	845	8.2	K2	57 17.403	0.09	4	70.068	-70 36 36.11	0.11	4	70.068				19221
8707	- 4	2513	8.5	K0	8 57 19.515	0.09	2	70.603	- 4 35 24.14	0.30	2	70.603				8742
8708	- 1	2174	7.92	K2	57 25.957	0.10	2	70.616	- 2 21 08.41	0.06	2	70.616	12435			8743
8709	-52	1829	7.8	K2	57 31.890	0.07	4	69.177	-53 08 53.78	0.11	4	69.177				8744
8710	-36	5239	8.3	K5	57 33.850	0.10	5	70.264	-36 50 29.62	0.10	5	70.264				8745
8711	-30	7063	8.8	K5	57 34.166	0.11	4	68.626	-31 10 36.39	0.15	4	68.626				8746
8712	-13	2735	8.8	F0	8 57 39.858	0.06	2	71.480	-14 19 57.93	0.04	2	71.480				8747
8713	-32	5949	8.4	K0	57 42.898	0.16	4	70.096	-33 07 02.81	0.09	4	70.096				8748
8714	- 8	2549	7.74	F5	57 55.277	0.04	2	69.698	- 8 55 33.80	0.13	2	69.698	12445			8749
8715	-28	6813	8.5	A0	58 02.442	0.15	4	69.110	-28 53 52.81	0.06	4	69.110				8750
8716	-54	1958	9.0	G0	58 04.540	0.05	4	70.110	-54 49 09.71	0.12	4	70.110				8751
8717	-11	2523	7.2	F0	8 58 09.335	0.03	2	71.572	-11 56 39.25	0.05	2	71.572				8752
8718	-21	2664	8.2	K0	58 10.454	0.07	4	69.553	-22 17 01.10	0.13	4	69.553				8753
8719	-18	2542	8.1	K0	58 10.678	0.25	2	70.682	-19 05 30.55	0.16	2	70.682				8754
8720	-61	1146	8.6	G5	58 11.200	0.17	5	69.899	-61 40 27.61	0.08	4	70.040				8755
8721	-51	3409	7.42	A2	58 11.270	0.23	4	70.098	-51 18 29.58	0.16	4	70.098	12450			1069
8722	-58	1326	7.7	K0	8 58 12.308	0.10	4	70.010	-58 32 42.37	0.03	4	70.010				8756
8723	-40	4110	4.42	F8	58 13.221	0.02	99	71.334	-41 03 28.55	0.03	97	71.342	1234	12451	2123	31234
8724	-43	4835	7.9	K5	58 14.874	0.09	4	69.574	-44 13 00.03	0.17	4	69.574				1070
8725	-12	2760	8.4	A2	58 17.355	0.14	4	71.898	-12 58 15.66	0.13	3	71.504				8757
8726	- 0	2107	8.8	K0	58 17.604	0.16	2	71.619	- 0 28 59.18	0.12	2	71.619				8758
8727	-62	1146	9.2	K0	8 58 25.538	0.08	4	70.096	-62 50 26.13	0.20	4	70.096				8759
8728	- 5	2689	8.3	A2	58 26.550	0.23	2	71.611	- 5 04 26.95	0.01	2	71.611				8760
8729	-42	4875	6.12	B3	58 32.813	0.15	6	70.566	-42 58 39.35	0.10	6	70.566	12464			21017
8730	-31	6792	9.2	G5	58 41.283	0.08	4	70.684	-32 06 32.09	0.15	4	70.684				8761
8731	-79	371	8.5	A3	58 42.116	0.05	4	69.061	-79 56 37.23	0.28	4	69.061				19222
8731 SP					8 58 42.038	0.25	4	69.810	-79 56 36.74	0.72	4	69.810				19222
8732	-48	4318	7.9	K0	58 42.559	0.15	4	70.817	-48 31 04.85	0.21	4	70.817				1071
8733	-34	5483	8.5	K0	58 47.737	0.02	4	70.637	-34 22 13.22	0.06	4	70.637				8762
8734	-14	2726	8.5	K0	58 48.245	0.02	2	71.730	-15 11 39.82	0.04	2	71.730				8763
8735	-47	4582	9.3	K0	58 50.339	0.04	4	70.762	-47 30 16.60	0.14	4	70.762				1072
8736	- 7	2696	7.7	K0	8 58 55.839	0.22	3	71.545	- 7 43 38.29	0.07	3	71.545				8764
8737	-10	2720	8.6	K2	59 01.826	0.01	2	71.796	-11 02 28.18	0.05	2	71.796				8765
8738	-72	767	8.5	K0	59 02.209	0.06	4	69.596	-73 01 27.54	0.20	4	69.596				19223
8739	- 0	2111	7.5	A2	59 05.429	0.04	2	71.606	- 1 16 44.99	0.35	2	71.606	12482			8766
8740	- 7	2699	9.0	G5	59 12.248	0.15	5	70.773	- 8 20 38.75	0.34	5	70.773				26555
8741	-38	5139	7.5	K2	8 59 13.775	0.03	4	70.666	-38 43 15.46	0.17	4	70.666				8767
8742	-30	7093	8.1	K2	59 18.681	0.09	4	69.634	-30 30 34.37	0.15	4	69.634				8768
8743	-59	1224	8.9	G5	59 21.789	0.08	5	69.878	-59 44 15.87	0.13	5	69.878				8769
8744	+ 0	2449	5.80	K0	59 24.645	0.03	68	71.157	- 0 17 08.93	0.04	64	71.139	1235	12487	2128	81235
8745	-34	5495	7.9	K2	59 25.273	0.09	4	70.754	-35 13 49.49	0.21	4	70.754				8770
8746	-24	7646	7.72	K0	8 59 31.801	0.08	4	70.162	-25 14 08.01	0.03	4	70.162	12491			8771
8747	-57	1825	8.0	M0	59 32.557	0.08	4	70.151	-57 43 12.18	0.08	4	70.151				8772
8748	-43	4856	9.3	K0	59 34.000	0.16	4	71.186	-43 30 18.23	0.17	4	71.186				1073
8749	-26	6661	7.24	F8	59 39.253	0.18	5	70.470	-26 22 06.06	0.28	5	70.470	12495			8773
8750	-49	4054	9.0	K2	59 47.584	0.07	5	70.967	-50 06 06.38	0.13	4	70.676				1074

8706 8.9m-9.4m, 0.3, 199°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
8751	+25	2029	5.45	A0	8 59 49.062	0.14	6	70.056	+24 39 02.91	0.14	6	70.056	2714	12496	2133	32714
8752	-27	6172	7.5	A2	59 57.400	0.04	4	71.209	-27 57 14.53	0.17	5	70.819				8774
8753	-20	2760	8.5	K0	9 00 04.769	0.08	5	70.674	-21 07 02.92	0.18	5	70.674				8775
8754	-29	7055	8.5	A0	00 08.803	0.10	4	70.723	-29 37 15.32	0.13	4	70.723				8776
8755p	+0	2451	8.4	B9	00 16.520	0.07	2	71.094	+0 36 23.08	0.48	2	71.094				8777
8756	-71	777	8.7	K0	9 00 16.962	0.20	4	70.641	-71 57 26.48	0.18	4	70.641				19224
8757	-25	6815	8.7	K0	00 18.561	0.12	4	70.203	-26 02 40.45	0.09	4	70.203				8778
8758	-8	2565	8.7	K0	00 19.045	0.10	2	71.308	-9 11 36.75	0.24	2	71.308				8779
8759	-55	1903	9.1	M0	00 21.681	0.18	5	70.772	-56 15 45.43	0.12	4	71.132				8780
8760	-77	469	8.3	M2	00 33.114	0.24	4	69.158	-77 53 45.07	0.11	4	69.158				19225
8760 SP	-75	554	8.23	M0	9 00 33.074	0.07	4	70.348	-77 53 44.64	0.60	4	70.348				19225
8761	SP				00 35.480	0.13	4	70.109	-75 31 42.34	0.16	4	70.109		12512		19226
8761	SP				00 35.328	0.49	3	70.590	-75 31 43.55	0.28	3	70.590		12512		19226
8762	-39	5097	9.1	K0	00 40.521	0.06	4	71.146	-39 27 22.02	0.07	4	71.146				8781
8763	-31	6835	6.90	B9	00 47.781	0.12	6	72.084	-32 14 29.87	0.13	6	72.084	2715	12515		32715
8764	-40	4850	8.4	G5	9 00 51.094	0.16	4	70.639	-40 49 59.69	0.09	4	70.639				1075
8765	+5	2105	8.2	K0	00 59.552	0.04	3	72.868	+4 39 28.22	0.06	2	72.761				8782
8766	-38	5172	7.6	M0	01 12.941	0.11	4	70.938	-38 24 39.31	0.03	4	70.938				8783
8767	-4	2530	6.74	A0	01 13.867	0.03	44	71.242	-4 58 20.78	0.04	42	71.250	1236	12522	2141	81236
8768	-22	2479	8.5	A2	01 14.308	0.20	4	70.137	-22 47 55.89	0.05	4	70.137				8784
8769	-13	2751	7.9	K2	9 01 14.576	0.05	2	71.685	-14 14 18.55	0.22	2	71.685		12523		8785
8770	-36	5313	8.9	G5	01 20.841	0.08	4	70.657	-37 09 10.36	0.38	3	70.126				8786
8771	-45	4807	9.0	G5	01 22.776	0.11	4	70.783	-45 27 18.65	0.17	4	70.783				1076
8772p	-36	5317	8.3	G5	01 30.143	0.10	4	71.070	-36 27 33.16	0.16	4	71.070				8787
8773	-42	4918	9.8	K0	01 31.972	0.12	3	70.516	-42 34 34.83	0.27	3	70.516				1077
8774	-65	1065	4.18	A5	9 01 39.722	0.09	7	69.873	-66 11 48.01	0.14	7	69.873	343	12532	2144	30343
8775	-57	1841	8.4	K5	01 40.505	0.14	4	70.953	-58 11 43.32	0.03	4	70.953				8788
8776	-41	4762	8.9	G5	01 42.457	0.05	4	70.710	-42 04 11.84	0.15	4	70.710				1078
8777	-31	6860	9.0	K0	01 55.620	0.14	4	70.094	-31 42 42.58	0.05	4	70.094				8789
8778	+4	2115	7.5	A0	02 03.063	0.01	2	69.674	+3 44 26.89	0.33	2	69.674				8790
8779	-43	4894	9.0	K5	9 02 13.740	0.19	4	70.693	-43 38 39.87	0.06	4	70.693				1079
8780	-1	2194	8.9	K5	02 15.740	0.02	2	69.681	-2 00 29.78	0.08	2	69.681				8791
8781	-53	2078	8.2	M0	02 17.490	0.08	5	70.953	-53 52 32.14	0.19	4	70.658				8792
8782	-66	965	9.1	F8	02 18.451	0.12	4	70.126	-67 12 21.95	0.17	4	70.126				19227
8783	-52	1893	7.8	K5	02 20.839	0.17	4	70.600	-52 41 57.09	0.13	4	70.600				8793
8784	+11	1978	9.0	G5	9 02 22.297	0.13	6	71.742	+10 41 23.98	0.22	6	71.742				26562
8785	-31	6877	8.0	M0	02 25.280	0.10	4	70.601	-32 14 55.15	0.09	4	70.601				8794
8786	-46	4883	3.69	K0	02 25.583	0.04	58	71.141	-46 53 52.76	0.05	55	71.120	342	12545	2149	30342
8787	-4	2533	8.2	K0	02 25.646	0.06	3	71.806	-4 28 27.38	0.27	3	71.806				8795
8788	+1	2231	8.7	K0	02 27.065	0.13	3	72.093	+1 13 37.61	0.08	3	72.093				8796
8789	+3	2139	8.7	K0	9 02 30.077	0.03	2	71.927	+3 08 34.08	0.04	2	71.927				8797
8790	-11	2543	8.1	K2	02 33.848	0.12	2	71.772	-11 29 52.93	0.04	2	71.772				8798
8791	-20	2781	7.5	K2	02 34.554	0.06	4	69.136	-20 49 25.98	0.08	4	69.136				8800
8792	-3	2563	7.3	K2	02 34.571	0.22	2	71.734	-3 34 50.46	0.17	2	71.734				8799
8793	-25	6854	8.2	F5	02 37.239	0.08	4	69.137	-25 27 44.71	0.11	4	69.137				8801
8794	+2	2138	7.9	A2	9 02 39.684	0.01	2	71.576	+2 36 51.63	0.20	2	71.576				8802
8795	-59	1247	8.9	F8	02 43.191	0.14	4	70.666	-59 50 20.68	0.20	4	70.666				8803
8796	-23	8041	8.4	F0	02 51.725	0.08	3	69.215	-23 59 22.67	0.17	4	69.226				8804
8797	-44	5097	8.0	K2	02 59.138	0.14	4	70.557	-44 36 36.88	0.09	4	70.557				1080
8798	-16	2681	8.2	K5	03 00.223	0.21	2	70.703	-17 08 20.90	0.10	2	70.703				8805
8799	-3	2570	8.2	K0	9 03 03.483	0.10	2	70.635	-3 22 25.73	0.11	2	70.635				8806
8800	-60	1305	7.95	K2	03 06.604	0.07	6	70.957	-60 21 58.17	0.12	4	71.318		12559		8807
8801	-57	1857	8.8	G5	03 11.216	0.13	5	70.979	-57 40 50.35	0.05	4	70.689				8808
8802	-54	2005	8.8	K2	03 12.358	0.11	4	70.135	-54 38 00.86	0.24	4	70.135				8809
8803	-12	2790	8.5	K0	03 17.990	0.02	2	71.984	-12 43 03.01	0.04	2	71.984				8810
8804	+5	2116	5.41	K0	9 03 20.467	0.13	6	69.607	+5 17 35.55	0.07	6	69.607	2717	12564	2150	32717
8805	-7	2716	8.5	K5	03 26.506	0.29	3	71.002	-8 20 06.14	0.05	3	71.002				8811
8806	-56	1997	8.2	K0	03 29.648	0.11	4	70.713	-56 31 47.67	0.13	4	70.713				8812
8807	-34	5567	9.0	K5	03 32.023	0.09	4	70.136	-34 35 56.64	0.08	4	70.136				8813
8808	-27	6240	8.3	K0	03 35.068	0.15	4	69.173	-27 52 56.20	0.16	4	69.173				8814
8809	-40	4891	8.5	K0	9 03 42.550	0.12	4	69.606	-40 30 34.21	0.21	4	69.606				1081
8810	-30	7182	8.1	K5	03 43.140	0.16	4	69.128	-31 03 28.08	0.05	4	69.128				8815
8811	-9	2739	8.0	K0	03 47.678	0.15	2	69.728	-9 55 55.17	0.04	2	69.728				8816
8812	-49	4110	9.0	G5	03 47.891	0.09	4	69.674	-49 52 21.15	0.18	4	69.674				1082
8813	-24	7707	8.5	F5	03 48.607	0.12	4	69.596	-24 54 26.15	0.05	4	69.596				8817
8814	-73	561	8.2	K0	9 03 55.044	0.11	4	69.854	-73 54 35.25	0.16	4	69.854				19228
8815	-35	5357	7.3	K2	03 56.808	0.10	4	70.042	-35 53 41.72	0.18	4	70.042				8818
8816	-15	2698	8.6	F8	04 00.825	0.09	2	71.472	-15 55 00.91	0.16	2	71.472				8819
8817	-54	2015	8.4	K0	04 02.959	0.11	4	69.585	-55 16 49.39	0.15	4	69.585				8820
8818	-6	2817	8.6	G0	04 04.127	0.13	2	70.517	-7 03 11.29	0.02	2	70.517				8821
8819	-63	1088	7.6	K0	9 04 04.491	0.13	4	70.092	-64 05 19.15	0.24	4	70.092				19229
8820	-18	2573	8.5	K2	04 10.353	0.09	2	70.523	-19 04 53.96	0.16	2	70.523				8822
8821	-48	4420	8.0	K0	04 17.770	0.08	4	69.140	-49 01 59.22	0.18	4	69.140				1083
8822	-85	183	5.38	F0	04 18.102	0.02	243	71.079	-85 27 57.70	0.03	239	71.082	918	12580	2155	60918
8822 SP					04 18.152	0.02	182	71.018	-85 27 57.56	0.04	174	70.972	918	12580	2155	70918

8755 A 7159A, 11.8m, 4°8, 92°.

8772 11.5m, 2°5, 137°.

CATALOG OF 23,001 STARS FOR 1950.0

357

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
8823	+ 2	2145	6.41	M0	9 04 24.956	0.12	6	68.781	+ 1 39 52.39	0.13	6	68.781	2718	12581		32718
8824	-41	4813	8.6	K5	04 28.681	0.07	4	69.583	-41 57 51.75	0.13	4	69.583				1084
8825	-22	2498	8.5	F5	04 38.106	0.17	4	69.105	-23 07 32.50	0.12	4	69.105				8823
8826	-33	5754	8.5	G5	04 40.379	0.09	4	70.060	-33 21 59.56	0.18	4	70.060				8824
8827	+ 0	2461	8.1	F8	04 59.476	0.05	2	69.677	+ 0 15 54.45	0.07	2	69.677				8825
8828	+30	1817	5.38	G5	9 05 00.140	0.16	6	69.651	+29 51 23.42	0.16	6	69.651	2719	12593	2158	32719
8829	-72	779	4.50	F5	05 01.709	0.12	6	68.627	-72 24 05.54	0.15	6	68.627	2720	12595		32720
8829	SP				05 01.632	0.11	21	71.330	-72 24 05.24	0.19	19	71.264	2720	12595		52720
8830	+11	1984	5.14	B8	05 02.373	0.05	14	71.088	+10 52 13.85	0.11	14	71.088	1238	12596	2159	31238
8831	+ 5	2120	8.6	K0	05 04.477	0.01	2	71.510	+ 4 52 01.58	0.18	2	71.510				8826
8832	-38	5263	8.1	K0	9 05 09.057	0.08	4	70.096	-39 17 47.12	0.06	4	70.096				8827
8833	-29	7143	7.48	G5	05 21.402	0.09	4	69.551	-29 52 51.13	0.07	4	69.551		12605		8828
8834	- 1	2207	7.12	G5	05 29.695	0.19	2	70.562	- 2 16 24.38	0.54	2	70.562		12609		8829
8835	-50	3849	6.47	K5	05 37.905	0.13	6	71.267	-51 00 34.47	0.07	6	71.267	2722	12611	2162	32722
8836	-69	1011	8.6	K0	05 39.060	0.17	4	68.618	-70 01 48.44	0.11	4	68.618				19230
8837	-31	6939	8.0	K5	9 05 45.469	0.15	4	69.664	-31 50 07.52	0.10	4	69.664				8830
8838	-46	4927	9.3	K2	05 47.586	0.15	4	70.830	-46 34 13.92	0.09	4	70.830				1085
8839	-17	2757	8.2	K2	05 48.580	0.07	2	70.732	-17 39 52.22	0.24	2	70.732				8831
8840	+27	1715	5.96	G5	05 50.855	0.08	7	72.057	+26 50 06.17	0.11	6	72.190	2724	12615	2163	32724
8841	-27	6279	8.1	A0	05 55.388	0.07	3	69.276	-27 33 02.14	0.06	4	69.272				8832
8842	-61	1182	8.6	G5	9 05 57.734	0.08	4	70.060	-61 33 44.03	0.11	4	70.060				8833
8843	-65	1078	9.0	K0	05 57.779	0.15	4	69.529	-65 58 31.35	0.13	4	69.529				19231
8844	-51	3507	8.7	K0	05 58.478	0.08	4	70.089	-51 41 50.71	0.16	4	70.089				1086
8845	-13	2770	8.6	K0	06 03.026	0.14	2	71.669	-13 56 23.69	0.05	2	71.669				8834
8846	-14	2757	7.26	G0	06 04.815	0.04	2	71.676	-14 56 24.61	0.04	2	71.676		12620		8836
8847	-33	5769	8.3	K5	9 06 05.250	0.05	4	70.661	-34 03 35.84	0.14	4	70.661				8835
8848	-45	4883	8.5	K0	06 07.539	0.16	4	70.573	-45 41 32.48	0.24	4	70.573				1087
8849	-42	4990	2.22	K5	06 09.246	0.04	35	71.045	-43 13 47.48	0.05	35	71.045	345	12623	2164	30345
8850	- 8	2588	5.50	B8	06 15.297	0.09	6	72.248	- 8 23 10.84	0.14	5	72.271	2725	12626		32725
8851	- 0	2131	8.5	F8	06 16.092	0.03	2	70.714	- 0 34 13.34	0.30	2	70.714				8837
8852	+ 4	2126	8.3	F8	9 06 16.908	0.10	3	72.196	+ 4 09 44.50	0.12	3	72.196				8838
8853	- 4	2549	8.0	G5	06 17.330	0.15	4	71.679	- 4 54 48.70	0.15	3	71.529				8839
8854	-62	1171	8.79	K0	06 18.130	0.06	4	70.380	-62 47 39.43	0.14	4	70.380		12628		8840
8855	- 4	2551	8.8	A2	06 18.621	0.25	2	71.736	- 5 01 56.49	0.30	2	71.736				8841
8856	-10	2754	7.31	G0	06 25.355	0.10	2	70.800	-10 33 12.48	0.15	2	70.800		12632		8842
8857	-25	6905	6.81	F8	9 06 25.622	0.20	4	69.666	-25 38 10.31	0.18	4	69.666		12633		8843
8858	-33	5774	9.0	K2	06 26.955	0.09	4	71.099	-33 29 03.44	0.17	4	71.099				8844
8859	-23	8088	8.6	K2	06 27.637	0.03	4	70.178	-23 40 52.61	0.07	4	70.178				8845
8860	-21	2704	8.6	K0	06 27.888	0.09	5	70.564	-21 46 48.47	0.12	5	70.564				8846
8861	+22	2061	5.22	G5	06 29.239	0.15	2	69.657	+22 14 55.99	0.04	2	69.657	1239	12635	2165	31239
8862	-30	7229	8.7	K2	9 06 29.964	0.08	5	70.955	-30 20 34.33	0.16	5	70.955				8847
8863	+ 2	2149	9.0	A2	06 30.839	0.12	2	72.099	+ 2 24 37.73	0.20	2	72.099				8848
8864	-26	6766	6.20	A2	06 32.800	0.11	6	70.887	-26 33 51.94	0.10	6	70.887	2726	12636	2166	32726
8865	-50	3869	8.5	K2	06 33.510	0.08	4	70.088	-50 35 42.75	0.10	4	70.088				1088
8866	- 5	2732	8.6	A3	06 34.885	0.26	2	70.711	- 5 45 28.40	0.15	2	70.711				8849
8867	-47	4682	8.8	K0	9 06 35.444	0.11	5	71.007	-47 56 03.81	0.07	3	70.508				1089
8868	-70	863	8.3	K0	06 38.211	0.04	5	69.971	-70 46 01.76	0.15	4	70.130				19232
8869	-31	6956	8.2	K0	06 47.373	0.11	4	70.874	-32 15 02.68	0.25	4	70.874				8850
8870	-11	2565	5.81	K0	06 47.633	0.02	113	70.847	-12 09 14.86	0.02	113	70.847	1240	12645	2168	81240
8871	+16	1913	8.8	A2	06 50.789	0.10	4	70.135	+16 17 46.14	0.09	4	70.135				26572
8872	-20	2803	7.42	K0	9 06 53.274	0.06	4	70.620	-20 43 25.15	0.10	4	70.620			2170	8851
8873	-34	5625	8.6	A5	06 54.852	0.06	5	71.160	-35 06 34.86	0.13	5	71.160				18443
8874	- 0	2138	8.4	K2	06 56.512	0.22	3	72.738	- 0 54 31.88	0.21	2	72.566				8852
8875	- 9	2755	7.64	K2	07 14.843	0.06	2	70.497	- 9 44 01.53	0.32	2	70.497			2171	8854
8876	-37	5502	8.2	K0	07 19.396	0.05	4	71.138	-37 30 45.94	0.19	4	71.138				8855
8877	-22	2507	7.0	K0	9 07 23.661	0.18	4	70.921	-22 23 55.31	0.15	4	70.921				8856
8878	-19	2637	8.2	K0	07 34.297	0.06	2	69.743	-19 32 14.26	0.03	2	69.743				8857
8879	-44	5177	8.0	K2	07 40.704	0.05	4	70.731	-44 21 45.47	0.11	4	70.731				1090
8880	+ 0	2471	8.2	K5	07 43.609	0.03	2	71.669	- 0 04 06.73	0.11	2	71.669				8858
8881	-29	7194	5.63	A3	07 49.155	0.03	69	71.098	-30 09 38.43	0.04	67	71.082	1241	12659	2173	31241
8882	-16	2701	7.08	F0	9 07 50.326	0.03	2	70.767	-16 39 29.46	0.06	2	70.767		12660		8859
8883	-42	5019	9.0	K5	07 50.722	0.16	4	70.525	-42 26 42.19	0.18	4	70.525				1091
8884	- 5	2738	7.5	K0	07 52.006	0.15	3	72.191	- 5 57 18.81	0.12	3	72.191				8860
8885	-11	2570	8.7	M1	07 55.306	0.21	2	71.675	-11 24 44.14	0.20	2	71.675				8861
8886	-67	1041	9.0	K5	07 58.878	0.14	4	69.996	-67 51 31.97	0.09	4	69.996				19233
8887	+ 1	2247	8.1	F5	9 08 01.381	0.20	2	71.617	+ 1 17 29.20	0.04	2	71.617				8862
8888	-46	4965	9.0	K2	08 03.014	0.11	4	70.142	-46 18 54.03	0.11	4	70.142				1092
8889	-22	2512	6.49	A0	08 08.630	0.12	6	69.926	-22 58 19.60	0.06	6	69.926	2728	12665		32728
8890	-76	571	8.4	K5	08 11.630	0.09	4	69.629	-76 46 31.32	0.03	4	69.629				19234
8890	SP				08 11.586	0.18	4	69.886	-76 46 30.94	0.67	4	69.886				19234
8891	-53	2172	8.4	K5	9 08 12.750	0.06	4	69.034	-54 12 35.44	0.13	4	69.034				8863
8892	-38	5330	7.5	K2	08 12.880	0.06	4	70.068	-38 32 37.02	0.10	4	70.068				8864
8893	-47	4706	8.0	G5	08 22.307	0.12	4	70.122	-48 00 06.74	0.09	4	70.122				1093
8894*	-27	6319	7.7	K5	08 23.514	0.06	4	70.126	-27 58 45.18	0.16	4	70.126				8865
8895	-26	6798	8.6	K0	08 28.854	0.12	3	69.890	-26 32 43.17	0.19	4	69.732				8866

8894 8.7m-11.0m, 0°8, 329°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
8896	-36	5423	7.5	K0	9 08 33.240	0.13	4	70.167	-36 38' 23.13	0.16	4	70.167				8867
8897	-12	2818	8.3	G5	08 33.448	0.01	2	69.800	-12 27 00.76	0.19	2	69.800				8868
8898	-34	5643	8.8	G5	08 36.072	0.06	4	70.500	-35 09 12.37	0.28	4	70.500				8869
8899	-52	2008	8.1	G5	08 36.934	0.15	4	69.176	-52 26 42.33	0.21	4	69.176				8870
8900	-41	4865	9.0	K0	08 39.251	0.11	4	70.106	-41 56 55.03	0.10	4	70.106				1094
8901	-45	4918	8.7	K0	9 08 53.072	0.08	4	70.078	-45 22 17.16	0.12	4	70.078				1095
8902	-60	1334	8.1	K2	08 56.858	0.12	5	69.598	-60 28 18.65	0.22	4	69.665				8871
8903	-53	2182	8.5	K0	08 57.421	0.09	4	69.615	-53 40 46.21	0.14	4	69.615				8872
8904	-2	2808	8.3	K0	09 15.415	0.02	2	69.672	-2 56 16.06	0.16	2	69.672				8873
8905	-1	2217	9.0	K0	09 19.311	0.02	2	69.696	-2 01 46.20	0.34	2	69.696				8874
8906	+3	2162	8.5	A0	9 09 25.455	0.17	2	70.616	+3 21 19.64	0.14	2	70.616				8875
8907	-51	3572	9.0	K0	09 29.583	0.12	4	68.706	-51 25 46.58	0.12	4	68.706				1096
8908	-67	1043	8.7	K0	09 36.193	0.12	4	68.658	-68 06 50.96	0.14	4	68.658				19235
8909	-58	1419	3.56	B3	09 39.033	0.06	6	70.495	-58 45 41.34	0.06	6	70.495				21018
8910	-19	2644	5.81	K0	09 41.149	0.02	162	71.499	-19 32 31.33	0.03	157	71.490	1242	12696	2179	21018
8911	-15	2728	8.5	A0	9 09 41.764	0.07	2	70.756	-15 56 20.38	0.15	2	70.756				31242
8912	-6	2844	7.6	K0	09 56.963	--	1	70.244	-6 43 28.00	--	1	70.244		12703		8876
8913	-48	4505	8.5	K5	10 00.490	0.18	4	69.562	-48 34 02.26	0.13	4	69.562				8877
8914	-10	2767	7.8	K0	10 03.253	0.21	2	69.766	-10 31 16.86	0.03	2	69.766				1097
8915	-61	1201	4.18	B3	10 08.525	0.08	6	70.501	-62 06 40.17	0.18	6	70.501		12707		8878
8916	-25	6966	7.36	*	9 10 13.185	0.07	4	69.181	-25 23 40.34	0.09	4	69.181		12711		21019
8917	-35	5472	8.0	K0	10 29.677	0.11	4	69.585	-35 28 39.22	0.20	4	69.585				8879
8918	-8	2610	8.6	K2	10 33.074	0.07	2	70.756	-8 29 19.61	0.12	2	70.756				8880
8919	-6	2850	8.7	F8	10 34.719	0.01	2	69.800	-7 20 54.53	0.36	2	69.800				8881
8920	-42	5058	8.8	K2	10 35.346	0.13	4	69.596	-42 44 39.22	0.08	4	69.596				8882
8921	-81	302	7.84	F5	9 10 44.670	0.05	10	69.178	-82 07 12.37	0.10	10	69.178	3979	12720		1098
8921	SP				10 44.709	0.16	10	69.325	-82 07 11.74	0.31	10	69.325	3979	12720		8883
8922	+3	2169	8.3	K0	10 44.765	0.03	2	71.666	+3 33 54.34	0.20	2	71.666				8884
8923	-31	7032	8.7	K0	10 45.261	0.15	4	69.674	-31 37 00.36	0.14	4	69.674				8885
8924	+4	2144	7.6	A2	10 48.042	0.01	2	72.137	+4 01 53.55	0.04	2	72.137		12724		8886
8925	-26	6833	8.7	K0	9 10 54.576	0.15	5	70.119	-26 47 50.19	0.10	3	70.119				8887
8926	-30	7305	9.2	G5	10 55.000	0.10	5	70.121	-30 41 41.04	0.09	4	69.866				8888
8927	-28	7028	8.0	K0	10 55.128	0.14	4	70.126	-29 10 16.36	0.18	4	70.126				8889
8928	-24	7846	8.0	K2	11 07.358	0.08	3	71.085	-24 25 09.78	0.13	4	70.629				8890
8929	-13	2788	8.5	K2	11 08.627	0.35	2	71.725	-14 05 22.11	0.04	2	71.725				8891
8930	-35	5482	9.5	F0	9 11 09.612	0.10	4	69.551	-35 40 17.21	0.10	4	69.551				8892
8931	+0	2482	8.0	K0	11 19.039	0.22	2	70.595	+0 01 13.67	0.28	2	70.595				1099
8932	-49	4214	8.8	K0	11 21.282	0.15	4	69.590	-49 41 44.16	0.04	4	69.590				8893
8933	-31	7051	8.9	K0	11 27.995	0.06	4	69.651	-32 11 48.03	0.12	4	69.651				8894
8934	-19	2654	8.7	K2	11 30.618	0.16	4	70.176	-20 05 43.65	0.04	4	70.176				8895
8935	+2	2167	3.84	A0	9 11 45.999	0.03	62	71.468	+2 31 28.07	0.04	60	71.444	347	12743	2190	30347
8936	-35	5492	8.4	K0	11 53.262	0.08	4	69.598	-36 09 27.28	0.03	4	69.598				8896
8937	-21	2733	8.5	K0	11 53.354	0.09	4	70.558	-21 34 16.15	0.09	4	70.558				8897
8938	-18	2613	7.0	K0	12 03.455	0.17	2	69.773	-18 28 02.65	0.13	2	69.773				8898
8939	-59	1315	7.7	K0	12 08.235	0.25	4	70.025	-59 58 32.93	0.04	4	70.025				1100
8940	-40	5037	9.5	K0	9 12 10.292	0.11	4	69.659	-40 27 33.36	0.10	4	69.659				8899
8941	-3	2623	8.0	K2	12 13.874	0.10	2	69.792	-4 20 04.06	0.23	2	69.792		12751		32731
8942	-43	5068	5.94	B5	12 17.515	0.04	5	70.453	-43 56 16.77	0.22	5	70.453	2731	12754	2193	8900
8943	-0	2158	6.99	A2	12 19.387	0.09	4	71.531	-1 22 44.06	0.07	4	71.531	2732	12755		19237
8944	-72	792	8.0	K2	12 21.544	0.14	4	69.150	-72 35 21.32	0.15	4	69.150				8901
8945	-25	6999	8.6	K5	9 12 21.841	0.08	4	69.631	-25 45 53.04	0.04	4	69.631				19238
8946	-74	572	8.7	K2	12 24.560	0.06	4	69.100	-74 39 06.35	0.09	4	69.100				1101
8947	-50	3944	8.7	K0	12 25.937	0.10	4	70.088	-50 24 03.53	0.16	4	70.088				8902
8948	-23	8175	8.6	K5	12 27.539	0.08	4	69.616	-23 44 34.78	0.07	4	69.616				8903
8949	-63	1106	8.1	K0	12 28.111	0.07	4	70.114	-63 59 25.45	0.19	4	70.114				32733
8950	+15	2009	5.57	K0	9 12 28.277	0.09	6	71.016	+15 08 59.77	0.17	6	71.016	2733	12758		8904
8951	+2	2168	7.7	K0	12 33.781	0.15	3	71.393	+2 17 31.17	0.18	3	71.393				8905
8952	-37	5572	8.2	K0	12 37.958	0.10	4	69.647	-37 30 16.16	0.19	4	69.647				30348
8953	-69	1023	1.80	A0	12 38.885	0.02	115	71.171	-69 30 37.35	0.03	112	71.171	348	12764	2196	8906
8954	-55	2034	8.2	K5	12 39.055	0.03	4	70.177	-55 53 04.87	0.15	4	70.177				8907
8955	-22	2542	7.9	K5	9 12 43.141	0.09	4	68.625	-22 35 26.33	0.15	4	68.625				8908
8956	-33	5884	8.8	M0	12 43.311	0.07	4	69.595	-33 28 26.54	0.12	4	69.595				32735
8957	-76	574	6.34	K0	12 44.911	0.12	6	69.026	-76 27 19.26	0.13	6	69.026	2735	12766		52735
8957	SP				12 44.792	0.18	6	69.006	-76 27 19.06	0.26	6	69.006	2735	12766		32736
8958	-55	2035	5.20	K0	12 48.842	0.15	8	71.460	-55 21 42.07	0.14	7	71.490	2736	12767	2197	8909
8959	-17	2799	8.4	G5	9 12 53.173	0.09	2	70.632	-17 45 15.21	0.02	2	70.632				8910
8960	+1	2263	8.8	K0	12 53.591	0.07	2	71.626	+1 12 23.36	0.03	2	71.626				8911
8961	-7	2766	6.88	F0	12 55.106	0.06	2	70.721	-8 16 26.78	0.52	2	70.721		12770		1102
8962	-42	5102	8.8	K0	13 14.251	0.04	4	69.596	-43 13 26.31	0.06	4	69.596				8912
8963	-12	2841	8.0	K2	13 17.479	0.04	2	71.647	-12 55 19.69	0.01	2	71.647				8913
8964	+3	2177	8.9	K0	9 13 18.077	0.15	3	71.850	+2 45 48.71	0.19	3	71.850				8914
8965	-57	1943	8.3	K5	13 19.522	0.10	4	70.704	-57 27 12.87	0.10	4	70.704				8915
8966	-33	5895	8.5	K2	13 23.265	0.05	4	69.574	-34 08 51.83	0.11	4	69.574				19239
8967	-64	1017	7.11	K0	13 23.921	0.27	4	70.629	-64 50 43.91	0.06	4	70.629		12781		19240
8968	-68	910	7.3	K0	13 28.859	0.04	5	71.144	-68 42 33.00	0.08	4	70.895				

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
8969	-63	1111	8.7	K0	9 13 28.988	0.07	4	70.203	-63 39 19.67	0.20	4	70.203	2737	12784	2201	8916
8970	-38	5408	4.98	K0	13 38.191	0.14	7	70.892	-38 21 39.26	0.14	6	70.685				32737
8971	-4	2580	8.5	K0	13 38.296	0.33	2	71.584	-4 39 27.73	0.23	2	71.584				8917
8972	-26	6881	7.74	K0	13 47.577	0.05	4	68.632	-26 59 11.92	0.07	4	68.632		12788		8918
8973	-0	2167	8.8	K2	13 48.038	0.16	2	70.610	-1 01 27.98	0.38	2	70.610				8919
8974	-8	2622	8.7	K0	9 13 49.592	0.33	2	70.670	-8 52 09.24	0.04	2	70.670				8920
8975	-57	1949	6.06	B5	13 55.406	0.12	6	70.560	-58 10 45.58	0.17	6	70.560		12792		21020
8976	-11	2594	8.6	K0	14 01.348	0.13	2	70.519	-11 42 51.07	0.08	2	70.519				8921
8977	-55	2044	7.5	K5	14 03.530	0.07	4	69.742	-56 03 07.18	0.10	4	69.742				8922
8978	-52	2149	8.3	K0	14 10.807	0.16	5	70.367	-53 16 25.40	0.13	4	70.625				8923
8979	-5	2762	5.40	K0	9 14 12.767	0.11	6	69.377	-6 08 36.92	0.09	6	69.377	2739	12800	2207	32739
8980	-58	1450	8.6	K	14 12.938	0.06	4	70.147	-58 40 06.27	0.19	4	70.147				8924
8981	-6	2872	8.6	K2	14 14.223	0.13	2	70.610	-6 30 21.56	0.32	2	70.610				8925
8982	-50	3963	9.0	K0	14 15.730	0.14	5	70.910	-51 08 02.32	0.13	4	70.606				1103
8983	-24	7895	8.9	G5	14 15.759	0.09	4	69.562	-25 05 35.75	0.18	4	69.562				8926
8984	-29	7291	8.5	K0	9 14 23.247	0.06	4	69.638	-29 55 15.66	0.13	4	69.638				8927
8985	-38	5422	8.4	M0	14 28.513	0.19	4	69.553	-38 27 02.78	0.06	4	69.553				8928
8986	-9	2788	7.7	K0	14 33.480	0.16	2	69.681	-9 24 41.36	0.06	2	69.681				8929
8987	+3	2182	8.6	F0	14 36.196	0.23	3	71.414	+2 53 19.16	0.09	3	71.414				8930
8988	-69	1028	8.6	K0	14 36.441	0.08	4	70.568	-69 54 30.68	0.15	4	70.568				19241
8989	-14	2802	8.2	K2	9 14 40.895	0.06	2	71.482	-15 17 51.53	0.15	2	71.482				8931
8990	-83	289	7.81	K5	14 46.859	0.05	4	69.573	-83 32 02.44	0.09	4	69.573		12812		19242
8990	SP				14 46.798	0.17	4	70.260	-83 32 02.00	0.18	4	70.260		12812		19242
8991	-55	2051	8.1	K2	14 56.467	0.09	4	70.265	-55 26 12.47	0.16	4	70.265				8932
8992	-54	2141	7.9	K5	14 56.672	0.08	4	69.675	-54 29 40.99	0.11	4	69.675				8933
8993	+1	2271	6.92	A0	9 14 58.650	0.05	2	71.535	+0 45 55.37	0.09	2	71.535		12819		8934
8994	-39	5345	7.14	K0	14 59.128	0.05	4	69.591	-39 54 24.36	0.04	4	69.591		12820		8935
8995	-6	2875	8.6	B9	15 07.944	0.10	2	70.647	-7 15 09.20	0.05	2	70.647				8936
8996	-2	2838	8.2	K0	15 24.095	0.01	2	71.576	-3 10 34.12	0.03	2	71.576		12829		8937
8997	-47	4811	8.0	K0	15 25.159	0.13	4	69.613	-47 31 30.38	0.21	4	69.613				1104
8998	-0	2174	8.2	K5	9 15 39.271	0.04	2	71.587	-0 23 48.45	0.08	2	71.587				8938
8999	-35	5549	7.5	K2	15 44.181	0.04	4	70.068	-35 28 45.64	0.03	4	70.068				8939
9000	-58	1465	2.25	F0	15 45.045	0.03	75	70.895	-59 03 53.39	0.04	73	70.888	351	12831	2212	30351
9001	-30	7410	8.6	K2	15 53.433	0.09	3	68.476	-31 11 36.15	0.23	4	68.672				8940
9002	-4	2590	8.5	A0	15 54.536	0.43	2	71.622	-4 41 13.18	0.27	2	71.622				8941
9003	-16	2742	8.3	K2	9 16 05.509	0.11	3	71.887	-16 25 08.45	0.10	3	71.887				8942
9004	-19	2674	8.3	A3	16 07.274	0.21	4	69.176	-20 09 34.82	0.17	4	69.176				8943
9005	+18	2165	6.60	F5	16 11.360	0.02	122	71.298	+17 55 03.68	0.03	117	71.270	350	12841	2213	80350
9006p	-51	3686	8.9	F0	16 15.375	0.13	4	69.645	-51 46 02.24	0.17	4	69.645				1107
9007	-44	5344	9.1	K2	16 15.752	0.06	4	70.125	-44 32 57.08	0.15	4	70.125				1105
9008	-2	2840	8.8	F5	9 16 19.327	0.10	2	70.780	-2 56 04.19	0.13	2	70.780				8944
9009p	-9	2792	8.11	A2	16 19.912	0.04	2	70.685	-10 12 07.14	0.38	2	70.685				8945
9010	-78	432	9.0	K2	16 34.563	0.10	4	70.090	-79 07 20.01	0.22	4	70.090				19243
9010	SP				16 34.488	0.06	4	70.069	-79 07 19.83	0.42	4	70.069				19243
9011*	-66	1000	8.9	F8	16 34.565	0.17	4	69.598	-66 20 47.93	0.09	4	69.598				19244
9012	-1	2240	7.7	A3	9 16 35.624	0.26	3	71.444	-2 14 46.77	0.20	3	71.444				8946
9013	-45	5033	9.1	K0	16 38.443	0.08	4	70.202	-45 44 15.69	0.21	4	70.202				1106
9014	-20	2856	8.7	G5	16 38.578	0.05	4	69.622	-20 34 35.98	0.17	4	69.622				8947
9015	-40	5098	9.2	K0	16 43.245	0.20	4	70.639	-40 52 47.90	0.18	4	70.639				1108
9016	-10	2801	7.8	K0	16 48.502	0.00	2	70.731	-10 56 43.74	0.26	2	70.731				8948
9017	-39	5380	8.7	K5	9 16 50.554	0.16	4	70.581	-39 32 45.42	0.15	4	70.581				8949
9018	-21	2756	7.2	A0	16 52.087	0.08	4	69.592	-22 20 29.82	0.18	4	69.592				8950
9019	-25	7073	8.4	G5	16 53.362	0.16	4	70.129	-26 03 18.51	0.04	4	70.129				8951
9020	-61	1231	8.4	K2	16 56.257	0.15	4	70.158	-61 28 03.30	0.10	4	70.158				8952
9021	-27	6466	8.4	A2	17 00.327	0.05	5	70.596	-27 55 42.40	0.07	5	70.596				8953
9022	-34	5780	9.0	K5	9 17 00.942	0.07	6	71.188	-34 19 01.69	0.12	4	70.932				8954
9023	-36	5564	8.9	K5	17 03.124	0.04	4	70.709	-36 25 14.04	0.23	4	70.709				8955
9024	+5	2158	6.51	A5	17 13.477	0.06	6	69.328	+5 25 41.74	0.09	6	69.328	2740	12863		32740
9025	-72	799	8.3	A3	17 15.033	0.28	5	70.459	-72 49 28.77	0.19	5	70.459				19245
9026	+4	2165	8.5	F2	17 16.103	0.20	2	69.678	+4 30 08.51	0.24	2	69.678				8956
9027	-29	7348	8.6	K5	9 17 17.463	0.11	4	70.527	-29 30 29.40	0.06	4	70.527				8957
9028	-64	1022	7.5	K0	17 17.731	0.10	5	70.355	-65 13 10.18	0.10	4	70.611				19246
9029	-5	2774	8.0	K5	17 18.979	0.04	2	70.650	-5 46 46.76	0.30	2	70.650				8958
9030*	-38	5465	8.4	F0	17 19.281	0.14	4	70.616	-38 39 09.64	0.08	4	70.616				8959
9031	-11	2609	4.94	G5	17 21.782	0.15	6	70.557	-11 45 46.31	0.13	6	70.557	2741	12867		32741
9032	-0	2178	8.5	K0	9 17 24.651	0.09	2	70.683	-0 26 17.20	0.17	2	70.683				8960
9033	-32	6272	8.0	K5	17 29.091	0.12	4	70.560	-32 43 13.45	0.13	4	70.560				8961
9034	-48	4600	9.0	F8	17 34.040	0.11	4	70.558	-48 45 57.44	0.27	4	70.558				1109
9035	-37	5651	8.3	K5	17 37.040	0.09	4	70.187	-37 56 01.77	0.12	4	70.187				8962
9036	-33	5973	6.48	B8	17 43.357	0.10	6	70.045	-33 53 27.60	0.12	6	70.045	2742	12873		32742
9037	-43	5170	9.1	G5	9 17 49.929	0.18	4	70.271	-43 59 21.12	0.08	4	70.271				1110
9038	+0	2498	8.2	G5	17 52.240	0.13	2	69.796	+0 29 47.32	0.30	2	69.796				8963
9039	-34	5790	7.0	K0	17 54.462	0.09	4	70.144	-35 17 10.34	0.12	4	70.144				8964
9040	-18	2647	8.8	A2	17 58.329	0.04	2	70.707	-18 44 02.49	0.03	2	70.707				8965
9041	-54	2186	6.44	B5	18 00.709	0.14	6	70.551	-54 58 27.13	0.13	6	70.551		12879		21021

9006 SDS, 11.0m, 4°4, 53°.
9009 A 7297AB, 11.3m, 2°9, 29°.

9011 9.6m-9.6m, 0°3, 75°.
9030 9.0m-9.4m, 0°4, 40°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
9042	-25	7094	8.6	A0	9 18 00.847	0.19	4	70.645	-25 24 55.19	0.10	4	70.645				8966
9043	-41	4997	9.0	K0	18 03.464	0.07	4	70.101	-41 47 15.25	0.18	4	70.101				1111
9044	-8	2644	8.6	K0	18 05.804	0.01	2	70.647	-8 40 28.03	0.55	2	70.647				8967
9045	-7	2785	7.5	F8	18 16.613	0.01	2	70.669	-7 31 01.38	0.21	2	70.669				8968
9046	-58	1485	8.6	K0	18 23.596	0.06	4	69.144	-59 15 52.07	0.09	4	69.144				8969
9047	+3	2193	7.02	F2	9 18 33.080	0.11	2	70.584	+3 09 15.17	0.14	2	70.584		12896		8970
9048	-14	2828	6.34	F5	18 33.541	0.09	6	68.935	-15 24 13.96	0.17	6	68.935	2744	12897		32744
9049	-42	5190	8.5	K0	18 33.872	0.05	4	69.602	-42 49 15.99	0.12	4	69.602				1112
9050	-23	8283	8.0	K0	18 35.858	0.08	4	69.671	-23 53 05.65	0.10	4	69.671				8971
9051	-66	1005	7.47	K5	18 38.791	0.15	4	69.654	-67 13 07.11	0.13	4	69.654		12904		19247
9052	-58	1488	7.7	K0	9 18 44.667	0.12	4	69.997	-58 43 17.40	0.20	4	69.997				8972
9053*	-77	502	8.4	F0	18 49.164	0.14	4	69.553	-78 12 58.38	0.10	4	69.553				19248
9053 SP					18 49.097	0.07	4	69.476	-78 12 58.61	0.24	4	69.476				19248
9054	-52	2244	8.5	A3	18 49.868	0.17	4	70.039	-52 19 40.98	0.09	4	70.039				8973
9055	-49	4326	8.2	K0	18 50.314	0.07	4	69.593	-49 41 39.26	0.16	4	69.593				1113
9056	+4	2172	8.8	K0	9 18 52.350	0.37	2	70.598	+4 09 42.51	0.07	2	70.598				8974
9057	-3	2660	8.8	G0	18 53.607	0.04	2	70.620	-4 02 00.94	0.22	2	70.620				8975
9058	-55	2099	8.1	K2	19 05.513	0.14	4	69.650	-56 16 17.33	0.12	4	69.650				8976
9059	-18	2652	8.7	K5	19 08.510	0.06	3	70.845	-18 43 52.13	0.25	2	71.625				8977
9060	-25	7114	4.93	M0	19 16.645	0.02	82	71.229	-25 45 06.46	0.03	79	71.219	1243	12916	2225	31243
9061	+2	2185	8.3	K2	9 19 18.209	0.04	2	71.613	+2 04 52.23	0.30	2	71.613				8978
9062	-59	1356	8.2	K5	19 22.780	0.04	4	69.713	-60 10 14.42	0.12	4	69.713				8979
9063	-2	2863	8.10	K2	19 23.572	0.10	2	70.632	-2 35 33.80	0.22	2	70.632		12921		8980
9064	-12	2877	7.7	K2	19 28.558	0.14	2	70.564	-13 19 24.37	0.00	2	70.564				8981
9065	+0	2504	8.1	G5	19 36.772	0.10	2	69.816	-0 12 42.91	0.36	2	69.816				8982
9066	-20	2873	8.4	K7	9 19 39.118	0.14	4	69.592	-20 30 00.46	0.18	4	69.592				8983
9067	-46	5118	8.8	K0	19 41.339	0.18	4	70.066	-46 59 49.29	0.08	4	70.066				1114
9068	-56	2112	8.3	K2	19 41.962	0.13	5	70.333	-57 03 33.32	0.12	4	70.582				8984
9069	-61	1242	4.86	K0	19 44.796	0.13	6	69.037	-62 11 27.80	0.12	6	69.037	2745	12923		32745
9070	-70	879	9.0	K2	20 07.969	0.05	4	70.088	-70 52 11.00	0.09	4	70.088				19249
9071	-48	4628	8.6	K2	9 20 09.517	0.20	4	70.145	-49 02 38.81	0.16	4	70.145				1115
9072	-14	2835	6.70	K0	20 10.007	0.14	2	70.722	-15 01 13.14	0.29	2	70.722		12930		8985
9073	-21	2774	8.2	K2	20 14.940	0.15	3	69.179	-22 18 17.20	0.14	4	69.199				8986
9074	-33	6008	7.6	K2	20 16.182	0.14	5	70.591	-33 47 21.43	0.23	5	70.591				8987
9075*	-9	2816	6.53	A2	20 24.472	0.24	2	70.528	-9 37 26.93	0.12	2	70.528		12936		8988
9076	-54	2219	2.63	B3	9 20 33.797	0.03	97	70.959	-54 47 47.12	0.03	96	70.956	353	12938	2228	30353
9077	-45	5099	6.00	G5	20 34.292	0.07	6	69.655	-45 49 59.63	0.12	6	69.655	2746	12939		32746
9078	-16	2767	8.4	K5	20 36.051	0.09	2	70.722	-17 16 55.52	0.06	2	70.722				8989
9079	-29	7391	7.81	A3	20 38.535	0.14	4	69.682	-30 18 38.10	0.16	4	69.682		12943		8990
9080	-62	1224	8.2	K0	20 40.835	0.15	4	70.109	-62 51 37.39	0.21	4	70.109				8991
9081	-34	5827	7.0	F8	9 20 46.320	0.09	4	70.611	-35 18 27.50	0.27	4	70.611				8992
9082	-30	7487	9.0	K0	20 48.028	0.18	4	69.714	-30 44 31.62	0.27	4	69.714				8993
9083	-84	217	8.29	G5	20 55.433	0.05	5	70.254	-84 26 09.46	0.22	5	70.254		12949		19250
9083 SP					20 55.098	0.12	3	69.877	-84 26 08.72	0.39	3	69.877		12949		19250
9084	-7	2798	8.4	K2	20 55.667	0.04	2	70.752	-7 27 24.11	0.02	2	70.752				8994
9085	-18	2660	8.6	F5	9 20 58.649	0.30	2	70.584	-19 12 45.25	0.24	2	70.584				8995
9086	-28	7196	4.90	K0	21 02.057	0.08	7	70.372	-28 37 08.93	0.08	7	70.372	2747	12952	2232	32747
9087	-39	5452	8.2	K2	21 04.872	0.18	4	70.170	-39 44 16.07	0.16	4	70.170				8996
9088	-10	2828	8.5	G5	21 07.648	0.21	2	70.774	-10 36 02.63	0.01	2	70.774				8997
9089	-16	2770	7.8	B9	21 09.152	0.14	2	71.646	-16 27 04.91	0.55	2	71.646				8998
9090	-25	7143	8.3	K2	9 21 09.649	0.06	4	69.643	-25 57 02.58	0.07	4	69.643				8999
9091	-15	2778	8.2	K2	21 09.905	0.06	2	71.729	-15 35 11.32	0.15	2	71.729				9000
9092	+2	2195	7.7	F0	21 19.712	0.14	2	71.637	+1 38 28.15	0.10	2	71.637				9001
9093	-4	2608	7.75	K2	21 25.027	0.39	2	71.704	-5 08 46.07	0.11	2	71.704		12960		9002
9094	-53	2355	8.4	K0	21 28.980	0.11	4	69.537	-53 24 02.61	0.12	4	69.537				9003
9095	-43	5229	9.0	G5	9 21 38.157	0.05	4	70.635	-43 41 38.41	0.10	4	70.635				1116
9096	-24	8028	8.5	K0	21 41.154	0.08	4	69.098	-24 24 44.93	0.07	4	69.098				9004
9097	+26	1939	4.61	K0	21 44.720	0.03	67	71.217	+26 23 54.05	0.05	67	71.217	1244	12972	2237	81244
9098	-36	5631	8.7	K2	21 45.640	0.11	4	70.608	-36 26 59.84	0.09	4	70.608				9005
9099	+5	2171	8.1	A2	21 48.222	0.17	4	69.995	+4 58 49.77	0.06	3	70.232				9006
9100	-12	2887	8.7	K0	9 21 52.628	0.29	2	71.746	-12 38 02.89	0.09	2	71.746				9007
9101	-32	6343	9.1	K2	21 59.039	0.16	4	70.681	-32 37 36.07	0.21	4	70.681				9008
9102	-41	5058	9.0	K0	22 06.346	0.08	4	70.702	-41 39 35.61	0.24	4	70.702				1117
9103	-64	1029	9.1	G5	22 17.296	0.10	7	70.860	-64 33 55.29	0.04	5	70.722				19251
9104	-3	2672	6.88	F5	22 22.604	0.40	2	70.726	-4 03 59.25	0.29	2	70.726		12985		9009
9105	-5	2790	8.4	M0	9 22 23.179	0.35	2	71.580	-5 47 34.65	0.17	2	71.580				9010
9106	+4	2184	8.4	G5	22 23.778	0.16	2	70.659	+4 13 38.28	0.22	2	70.659				9011
9107	-73	596	8.7	K5	22 24.939	0.09	4	69.639	-73 42 07.95	0.26	4	69.639				19252
9108	-38	5543	8.7	K0	22 25.404	0.10	4	70.150	-38 36 29.62	0.08	4	70.150				9012
9109	-50	4109	9.4	G5	22 35.408	0.05	4	69.633	-51 11 29.90	0.08	4	69.633				1118
9110	-40	5183	8.9	K0	9 22 44.750	0.09	4	70.593	-40 28 07.37	0.14	4	70.593				1119
9111	-0	2190	8.0	A2	22 45.519	0.02	2	71.592	-0 37 14.94	0.12	2	71.592				9013
9112	+17	2078	6.27	K0	22 46.329	0.08	6	69.004	+16 48 07.90	0.17	6	69.004	2750	12990	2240	32750
9113	-36	5644	8.7	G5	22 48.084	0.02	4	71.063	-37 05 55.69	0.12	4	71.063				9014
9114	-4	2616	5.81	K5	22 53.999	0.03	44	71.262	-4 54 03.10	0.05	43	71.262	1245	12992	2241	31245

9053 8.7m-10.2m, 0°4, 271°.

9075 A 7334AB, 7.3m-7.3m, 0°1;
C, 11.6m, 1°8, 204°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
9115	-71	822	7.9	A3	9 22 56.851	0.16	4	70.063	-71 35 34.65	0.09	4	70.063				19253
9116	-14	2846	9.1	A2	23 00.838	0.20	2	72.474	-14 25 00.27	0.46	2	72.474				9015
9117	-45	5130	9.3	K0	23 07.267	0.19	5	71.017	-45 56 32.51	0.12	4	70.956				1120
9118	-28	7238	7.78	K2	23 08.103	0.11	4	69.626	-28 45 44.60	0.19	4	69.626		12995		9016
9119	-44	5460	8.1	M1	23 10.081	0.05	4	70.678	-45 09 35.58	0.06	4	70.678				1121
9120	-49	4384	8.5	K0	9 23 12.980	0.06	4	70.607	-50 04 11.16	0.07	4	70.607				1122
9121	-51	3785	8.2	G5	23 15.610	0.06	4	70.147	-51 36 40.74	0.12	4	70.147				1123
9122	-9	2830	8.5	F0	23 20.565	0.00	2	70.733	-10 16 12.99	0.21	2	70.733				9017
9123	-61	1268	8.9	K0	23 20.899	0.06	5	70.112	-62 08 39.87	0.28	5	70.112				9018
9124*	-24	8060	6.91	B9	23 23.125	0.08	5	70.512	-25 07 13.04	0.12	4	70.355		12997	2244	9019
9125	+1	2299	8.6	A5	9 23 24.152	0.09	2	71.809	+0 49 10.62	0.20	2	71.809				9020
9126	+3	2202	8.2	G5	23 24.269	0.36	2	72.551	+3 14 49.63	0.01	2	72.551				9021
9127	+4	2187	9.0	K2	23 25.428	0.12	2	72.580	+4 29 01.14	0.47	2	72.580				9022
9128	-26	7037	8.3	M1	23 26.444	0.06	4	70.247	-27 14 05.16	0.21	4	70.247				9023
9129	-47	4920	9.8	K0	23 28.448	0.05	4	70.968	-47 50 06.38	0.16	4	70.968				1124
9130	-46	5170	9.0	G5	9 23 35.103	0.06	4	70.732	-46 45 44.28	0.11	4	70.732				1125
9131	-33	6055	7.9	K0	23 36.332	0.17	4	70.877	-34 06 20.58	0.20	4	70.877				9024
9132	-20	2903	7.5	A3	23 37.889	0.07	5	70.949	-20 32 40.37	0.10	5	70.949				9025
9133	-35	5669	9.1	K2	23 40.493	0.12	4	70.749	-35 34 14.75	0.20	4	70.749				9026
9134	-31	7261	9.1	F5	23 43.980	0.18	4	71.151	-31 58 07.02	0.25	4	71.151				9027
9135	+1	2300	8.8	K5	9 23 46.130	0.00	2	72.598	+0 49 48.98	0.10	2	72.598				9028
9136	-19	2710	8.0	K0	23 51.834	0.04	2	72.271	-19 52 33.89	0.18	2	72.271				9029
9137	-11	2635	8.6	K0	23 53.990	0.08	2	72.113	-12 19 12.47	0.53	2	72.113				9030
9138	-54	2277	7.5	K0	24 01.044	0.05	5	70.982	-54 47 23.73	0.12	4	70.692				9031
9139	-29	7459	7.18	A2	24 01.357	0.13	5	70.614	-29 49 02.93	0.16	4	70.456		13016		9032
9140	-7	2807	8.7	K0	9 24 01.704	0.05	2	72.284	-7 24 35.45	0.07	2	72.284				9033
9141	-32	6391	8.3	K5	24 10.852	0.15	4	69.588	-33 07 11.78	0.17	4	69.588				9034
9142	-1	2260	8.5	K0	24 16.728	0.01	2	70.778	-1 32 50.47	0.02	2	70.778				9035
9143	-13	2855	8.1	G5	24 19.712	0.09	2	70.725	-14 16 19.98	0.25	2	70.725				9036
9144	-17	2857	8.8	K0	24 23.475	0.16	2	71.267	-18 23 07.66	0.24	2	71.267				9037
9145	-67	1082	8.2	K0	9 24 26.900	0.18	5	71.362	-68 08 42.85	0.14	5	71.362				19254
9146	-56	2160	8.2	K5	24 31.363	0.14	4	69.737	-57 02 25.78	0.13	4	69.737				9038
9147	-21	2800	8.6	G5	24 40.076	0.10	4	71.164	-21 45 20.23	0.12	4	71.164				9039
9148	+1	2305	8.8	K0	24 40.214	0.17	2	72.765	+1 31 25.62	0.03	2	72.765				9040
9149	-59	1389	7.2	K0	24 41.674	0.11	5	70.772	-59 31 35.93	0.11	4	71.132				9041
9150	-69	1059	9.00	A3	9 24 42.604	0.12	4	71.059	-70 11 43.72	0.08	4	71.059		13036		19255
9151	-42	5287	9.0	K0	24 45.136	0.07	4	69.665	-42 54 38.11	0.09	4	69.665				1126
9152	-69	1060	8.0	K5	24 51.831	0.19	4	70.725	-69 25 11.51	0.30	4	70.725				19256
9153	-3	2684	8.3	A2	24 53.835	0.10	2	70.837	-4 20 38.32	0.16	2	70.837				9042
9154	-76	584	7.60	K0	24 53.964	0.08	4	70.071	-76 30 34.40	0.17	4	70.071		13042		19257
9154 SP					9 24 53.909	0.14	4	70.521	-76 30 34.11	0.26	4	70.521		13042		19257
9155	-4	2628	8.4	A0	24 56.119	0.01	2	72.183	-5 13 12.87	-	1	72.080				9043
9156	-3	2685	7.5	G0	25 01.414	0.23	2	71.980	-3 34 47.25	0.00	2	71.980				9044
9157	-8	2680	2.16	K2	25 07.772	0.04	26	71.203	-8 26 26.77	0.06	26	71.203	354	13044	2249	30354
9158	-55	2175	7.8	K0	25 09.712	0.12	5	70.523	-55 44 29.48	0.13	5	70.523				9045
9159	+3	2208	8.5	G5	9 25 20.548	0.16	2	71.757	+3 03 17.06	0.12	2	71.757		13049		9046
9160	-51	3828	8.6	K0	25 20.651	0.15	4	70.592	-52 18 05.36	0.19	4	70.592				9047
9161	-76	585	7.67	K5	25 30.221	0.12	4	69.987	-77 02 06.52	0.07	4	69.987		13054		19258
9161 SP					25 30.170	0.21	4	69.951	-77 02 06.40	0.19	4	69.951		13054		19258
9162	-25	7209	8.3	F8	25 30.370	0.08	4	70.147	-26 08 36.50	0.12	4	70.147				9048
9163	-75	582	8.03	G5	9 25 40.664	0.15	5	70.526	-75 33 20.05	0.19	5	70.526		13058		19259
9163 SP					25 40.563	0.25	4	71.545	-75 33 20.25	0.31	4	71.545		13058		19259
9164	-23	8402	7.9	K0	25 42.421	0.04	4	70.618	-23 27 37.88	0.17	4	70.618			2251	9049
9165	-7	2813	7.0	M0	25 45.044	0.07	2	70.727	-7 30 07.92	0.29	2	70.727				9050
9166	+8	2226	5.88	K0	25 49.461	0.14	6	69.277	+8 24 26.10	0.11	6	69.277	2752	13063		32752
9167	-80	350	5.44	F2p	9 25 51.986	0.01	250	71.051	-80 34 14.82	0.02	244	71.019	2753	13066		62753
9167 SP					25 51.977	0.04	131	70.997	-80 34 14.77	0.06	126	70.988	2753	13066		72753
9168	-9	2844	7.8	K2	25 54.674	0.12	2	71.696	-10 06 00.62	0.41	2	71.696				9051
9169	-8	2686	8.0	K0	25 58.328	0.22	3	71.898	-8 58 40.10	0.07	2	71.782				9052
9170	-33	6095	9.2	K5	26 01.562	0.10	4	70.271	-34 12 10.33	0.15	4	70.271				9053
9171	-30	7584	9.0	K0	9 26 08.684	0.21	5	70.129	-30 54 06.17	0.10	5	70.129				9054
9172	-80	352	8.7	K0	26 18.381	0.03	5	70.807	-80 53 53.65	0.10	5	70.807				19260
9172 SP					26 18.279	0.23	4	70.597	-80 53 53.84	0.13	4	70.597				19260
9173	+0	2522	8.6	K0	26 18.712	0.24	2	71.684	+0 01 59.23	0.03	2	71.684				9055
9174	-37	5806	8.2	K2	26 24.127	0.11	4	70.586	-37 52 25.59	0.15	4	70.586				9056
9175*	-20	2912	7.8	B9	9 26 24.361	0.14	4	69.206	-20 34 51.41	0.10	4	69.206				9057
9176	-48	4723	8.5	G5	26 26.120	0.09	4	70.631	-48 54 18.40	0.19	4	70.631				1127
9177	-15	2811	8.5	K5	26 30.674	0.04	2	70.579	-15 58 06.96	0.18	2	70.579				9058
9178	-43	5314	8.8	K0	26 38.162	0.12	4	71.131	-44 00 10.95	0.18	4	71.131				1128
9179	-36	5711	8.7	A0	26 43.895	0.09	4	70.200	-36 42 53.69	0.04	4	70.200				9059
9180	-32	6428	8.9	K0	9 26 51.038	0.12	4	70.221	-32 49 10.76	0.23	4	70.221				9060
9181	-16	2801	8.8	K0	26 53.239	0.19	3	70.848	-17 02 18.63	0.30	3	70.848				9061
9182	-13	2866	7.9	K5	26 53.452	0.10	2	70.635	-13 31 02.58	0.01	2	70.635				9062
9183	-52	2393	8.7	K0	26 54.022	0.09	4	70.109	-53 11 17.72	0.10	4	70.109				9063
9184	-65	1110	8.8	G5	26 56.304	0.20	4	69.594	-65 52 57.85	0.10	4	69.594				19261

9124 7.0m-9.3m, 0°6, 313°.

9175 A 7395, 8.3m-9.5m, 0°9, 136°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
9185	-42	5323	8.5	G5	9 27 02.842	0.28	4	70.627	-42 35' 22.09	0.16	4	70.627				1129
9186	-58	1536	7.4	K0	27 03.568	0.11	5	70.300	-58 55 50.38	0.27	4	70.541				9064
9187	-46	5209	9.5	F0	27 05.193	0.15	4	70.713	-47 12 00.04	0.08	4	70.713				1130
9188	-16	2804	7.9	A2	27 05.836	0.19	2	70.551	-17 17 08.64	0.16	2	70.551				9065
9189	-67	1086	8.5	A0	27 05.930	0.08	4	69.679	-67 47 44.30	0.12	4	69.679				19262
9190	-35	5724	4.64	K2	9 27 10.700	0.02	100	71.381	-35 43 54.53	0.04	95	71.350	356	13091	2255	30356
9191	-44	5511	7.5	K0	27 13.742	0.08	4	70.545	-44 34 54.86	0.10	4	70.545				1131
9192	+ 2	2212	8.4	F5	27 17.082	0.17	2	70.620	+ 2 25 08.69	0.04	2	70.620				9066
9193	-63	1129	8.4	K5	27 20.122	0.07	4	69.581	-63 42 15.90	0.11	4	69.581				9067
9194	-18	2690	8.6	K5	27 21.864	0.16	2	69.669	-18 55 49.73	0.01	2	69.669				9068
9195	-12	2912	8.5	M1	9 27 24.316	0.02	2	71.534	-12 30 51.30	0.60	2	71.534				9069
9196	-24	8145	7.54	K0	27 31.648	0.09	3	69.115	-25 18 29.38	0.21	4	69.152		13100		9070
9197	-66	1018	6.18	A0	27 32.023	0.11	6	69.715	-66 28 58.27	0.13	6	69.715	2754	13103		32754
9198	-59	1403	8.3	K5	27 38.498	0.12	4	69.124	-60 13 15.72	0.22	4	69.124				9071
9199	- 5	2814	8.2	A2	27 40.440	0.01	2	70.644	- 5 46 55.60	0.02	2	70.644				9072
9200	-34	5924	8.6	A0	9 27 40.815	0.03	4	70.154	-35 07 21.92	0.05	4	70.154				18444
9201	-26	7119	8.6	K0	27 43.202	0.08	4	69.180	-27 01 44.12	0.14	4	69.180				9073
9202	-50	4195	9.2	K5	27 46.225	0.05	4	68.550	-50 25 27.46	0.14	4	68.550				1132
9203	-29	7516	7.6	K5	27 59.758	0.03	4	69.129	-29 55 26.72	0.10	4	69.129				9074
9204	+ 1	2316	7.8	A0	28 00.363	0.05	2	70.592	+ 1 28 39.01	0.18	2	70.592				9075
9205	-29	7525	8.7	K0	9 28 26.040	0.09	4	70.327	-30 09 41.34	0.28	4	70.327				9076
9206	-21	2825	8.2	K2	28 34.677	0.07	4	69.702	-21 29 50.34	0.19	4	69.702				9077
9207	-37	5838	8.42	F5	28 45.150	0.10	4	69.660	-38 11 40.00	0.12	4	69.660		13142		9078
9208	- 2	2916	7.2	K0	28 47.485	0.12	2	71.499	- 3 06 02.90	0.09	2	71.499				9079
9209	+ 2	2214	7.9	G5	28 48.264	0.13	2	70.647	+ 2 29 58.28	0.13	2	70.647				9080
9210	+23	2107	4.48	K5	9 28 52.233	0.13	6	69.294	+23 11 21.37	0.05	6	69.294	2756	13143		32756
9211	-38	5644	8.3	K0	28 54.133	0.05	4	70.112	-39 02 12.01	0.14	4	70.112				9081
9212	- 7	2829	8.0	K2	28 55.356	0.13	2	71.551	- 7 55 24.83	0.19	2	71.551				9082
9213	-31	7360	8.6	K5	28 56.922	0.08	4	69.707	-31 47 48.33	0.18	4	69.707				9083
9214	-11	2652	7.14	K0	29 03.474	0.27	2	71.535	-11 50 27.52	0.15	2	71.535		13147		9084
9215	-23	8457	7.7	K2	9 29 04.622	0.21	4	69.641	-24 07 21.55	0.11	4	69.641				9085
9216	-61	1284	8.0	K5	29 05.553	0.04	5	69.854	-61 34 27.22	0.09	4	69.981				9086
9217	-17	2885	8.2	K2	29 06.403	0.06	2	69.684	-18 11 46.04	0.12	2	69.684				9087
9218	-27	6674	8.0	K2	29 06.467	0.08	4	70.518	-27 55 24.26	0.12	4	70.518				9088
9219	-44	5539	8.8	K0	29 10.913	0.14	4	70.184	-45 14 29.61	0.11	4	70.184				1133
9220	+11	2053	5.12	G5	9 29 14.995	0.07	12	70.011	+11 31 18.46	0.09	12	70.011	1246	13149	2263	31246
9221	-74	596	9.6	A0	29 26.309	0.07	4	70.056	-74 55 21.64	0.09	4	70.056				19263
9221 SP					29 26.115	0.58	4	70.425	-74 55 21.59	0.74	4	70.425				19263
9222	-32	6477	8.6	K0	29 26.753	0.07	4	70.147	-33 18 58.86	0.25	4	70.147				9089
9223	- 3	2701	8.5	K0	29 30.156	0.02	2	70.655	- 4 11 27.20	0.13	2	70.655				9090
9224	-14	2876	8.5	K2	9 29 33.821	0.08	2	71.672	-14 32 27.39	0.24	2	71.672				9091
9225	-16	2813	9.0	G5	29 35.458	0.14	2	71.751	-16 35 08.15	0.50	2	71.751				9092
9226	-65	1111	8.4	K0	29 37.460	0.21	4	70.068	-65 58 04.20	0.20	4	70.068				19264
9227	-55	2249	8.2	G5	29 38.284	0.07	4	70.634	-55 20 44.79	0.28	4	70.634				9093
9228	-22	2632	8.2	K2	29 38.925	0.08	4	69.693	-23 06 37.65	0.09	4	69.693				9094
9229	-56	2270	3.4v	K5	9 29 41.979	0.05	51	71.391	-56 48 47.45	0.05	49	71.381	361	13160	2267	30361
9230	-11	2656	8.8	K0	29 44.646	0.23	2	71.737	-12 03 56.34	0.29	2	71.737				9095
9231	-55	2256	8.6	F8	29 46.690	0.09	4	70.639	-56 12 24.66	0.08	4	70.639				9096
9232	-81	347	8.17	K5	29 50.177	0.18	4	69.123	-81 37 13.70	0.12	4	69.123		13164		19265
9232 SP					29 50.134	0.15	4	69.869	-81 37 13.23	0.15	4	69.869		13164		19265
9233	-38	5667	7.54	B9	9 29 59.563	0.07	4	70.073	-38 42 58.28	0.09	4	70.073		13167		9097
9234	-10	2857	7.5	K0	30 00.233	0.02	2	70.768	-10 57 47.42	0.21	2	70.768		13168		9098
9235	-18	2708	5.70	A2	30 00.872	0.12	6	70.346	-19 10 43.04	0.10	6	70.346	2757	13169		32757
9236	+ 2	2217	6.15	F5	30 06.296	0.09	7	71.745	+ 2 05 10.54	0.10	6	71.681	2758	13172	2271	32758
9237	+ 3	2227	8.8	K0	30 08.417	0.01	2	71.699	+ 3 11 32.30	0.26	2	71.699				9099
9238	-35	5764	7.9	K0	9 30 12.070	0.06	4	70.153	-35 47 47.63	0.18	4	70.153				9100
9239	-47	5007	7.62	K0	30 12.942	0.10	5	70.763	-47 58 23.37	0.23	5	70.763		13177		1134
9240	-25	7284	8.0	F8	30 16.948	0.14	5	70.909	-26 12 16.12	0.10	4	70.614				9101
9241	-48	4778	8.0	G5	30 18.542	0.09	5	71.126	-49 10 48.94	0.13	5	71.126				1135
9242	-40	5284	5.36	K0	30 20.035	0.12	6	71.197	-40 25 38.64	0.03	6	71.197	2759	13180	2273	32759
9243	-71	844	8.2	K0	9 30 21.482	0.10	4	70.687	-71 32 52.11	0.21	4	70.687				19266
9244	+29	1913	6.35	A2	30 22.804	0.08	6	71.979	+28 35 25.03	0.09	6	71.979	2760	13182		32760
9245	- 1	2274	8.7	K2	30 26.169	0.09	2	72.115	- 2 05 10.92	0.31	2	72.115				9102
9246	-40	5288	8.0	G5	30 28.500	0.08	4	70.697	-40 57 29.22	0.14	4	70.697				1136
9247	-26	7175	7.4	M0	30 28.506	0.19	4	70.312	-27 11 33.28	0.13	4	70.312				9103
9248	-12	2926	6.21	K5	9 30 31.641	0.19	4	71.291	-13 17 40.95	0.12	4	71.291	2761	13185	2274	9104
9249	-41	5162	8.5	G5	30 32.935	0.14	4	70.769	-42 01 50.16	0.15	4	70.769				1137
9250	- 8	2702	8.7	K5	30 40.741	0.22	2	70.801	- 9 05 38.73	0.07	2	70.801				9105
9251	-36	5757	8.3	F0	30 41.088	0.15	4	70.579	-37 00 14.77	0.11	4	70.579				9106
9252	-53	2537	8.0	K5	30 49.923	0.07	5	70.992	-54 02 02.22	0.03	4	71.407				9107
9253	- 6	2939	6.39	K0	9 30 51.281	0.15	2	71.668	- 6 58 03.26	0.24	2	71.668		13190		9108
9254	-20	2936	5.16	K0	30 54.193	0.02	120	71.014	-20 53 36.50	0.02	120	70.998	1247	13191	2275	81247
9255	-66	1026	8.7	K0	31 02.687	0.15	4	70.197	-67 06 25.13	0.09	4	70.197				19267
9256	-59	1414	7.32	G0	31 09.171	0.14	4	70.594	-60 18 04.46	0.12	4	70.594		13200		9109
9257	-72	835	5.52	K2	31 14.431	0.04	59	70.638	-72 51 32.46	0.03	57	70.569	362	13205	2280	30362

9229 3.4m to 4.2m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
9257	SP				9 31 14.398	0.06	53	71.265	-72 51 32.42	0.12	54	71.231	362	13205	2280	50362
9258		-38 5680	8.5	G5	31 25.597	0.19	5	70.957	-39 08 35.13	0.15	3	70.133				9110
9259		-64 1043	7.90	K5	31 25.991	0.13	5	70.697	-65 09 21.39	0.14	4	71.035		13213		19268
9260		-35 5783	9.1	F5	31 31.253	0.03	4	70.657	-35 28 25.45	0.24	4	70.657				9111
9261		-19 2744	8.5	G5	31 33.730	0.06	2	70.635	-19 40 21.84	0.05	2	70.635				9112
9262		-9 2871	8.5	K2	9 31 33.858	0.12	2	70.792	-10 20 04.05	0.18	2	70.792				9113
9263		-15 2833	8.8	K2	31 41.541	0.07	2	71.554	-15 27 40.33	0.40	2	71.554				9114
9264		-36 5775	8.7	K2	31 42.310	0.09	4	70.643	-36 42 30.27	0.19	4	70.643				9115
9265		-30 7667	8.6	K0	31 48.530	0.06	4	69.100	-30 37 26.77	0.20	4	69.100				9116
9266		-37 5878	8.7	K0	31 49.526	0.15	4	70.166	-38 09 54.02	0.34	4	70.166				9117
9267		+4 2210	8.5	F8	9 31 56.925	0.16	2	71.727	+3 46 49.89	0.05	2	71.727		13220		9118
9268		+17 2105	8.7	G	31 58.815	0.07	4	69.580	+16 40 11.57	0.10	4	69.580				26618
9269		-49 4504	7.55	G5	31 59.700	0.11	4	70.169	-49 30 08.18	0.12	4	70.169		13222		1138
9270		-2 2925	7.18	G5	32 01.353	0.08	2	71.665	-3 15 53.40	0.04	2	71.665		13224		9119
9271		-5 2840	5.70	K0	32 02.946	0.05	5	71.364	-5 41 28.33	0.12	4	71.394	2763	13226	2283	9120
9272		+0 2531	8.6	K2	9 32 02.991	0.01	2	71.599	-0 15 50.03	0.17	2	71.599				9121
9273		-18 2722	8.3	A2	32 04.384	0.06	2	71.729	-18 31 44.41	0.09	2	71.729				9122
9274		-0 2216	8.5	K5	32 09.687	0.23	3	71.798	-1 10 33.86	0.03	2	71.652				9123
9275		-15 2837	8.0	M2	32 15.428	0.09	2	69.749	-16 09 09.00	0.06	2	69.749				9124
9276		+1 2327	8.4	G5	32 16.847	0.34	2	71.521	+0 52 51.20	0.11	2	71.521				9125
9277		-40 5316	8.5	M0	9 32 18.703	0.14	4	70.132	-40 49 58.58	0.16	4	70.132				1139
9278		+1 2326	8.8	K0	32 20.093	0.10	2	71.513	+1 25 22.76	0.04	2	71.513				9126
9279		-50 4270	5.16	B3	32 24.626	0.10	6	68.906	-51 01 55.58	0.06	6	68.906	2764	13234	2285	32764
9280		-62 1256	7.9	K5	32 29.687	0.23	4	69.541	-63 00 30.33	0.07	4	69.541				9127
9281		-4 2667	7.7	K0	32 36.976	0.07	2	70.715	-5 08 41.71	0.07	2	70.715				9128
9282		-2 2928	8.3	A5	9 32 45.016	0.08	2	70.607	-3 02 51.39	0.06	2	70.607				9129
9283		-1 2281	8.8	K2	32 46.525	0.01	2	69.838	-1 55 36.03	0.22	2	69.838				9130
9284		-30 7686	8.6	K2	33 00.763	0.10	4	68.666	-31 12 01.64	0.17	4	68.666				9131
9285		+3 2233	7.8	K0	33 04.979	0.10	2	69.706	+2 51 41.04	0.07	2	69.706				9132
9286		-31 7425	8.7	K2	33 05.300	0.13	4	70.103	-32 12 09.93	0.27	4	70.103				9133
9287		-51 3954	8.5	K2	9 33 05.847	0.19	5	69.180	-51 56 16.17	0.10	4	69.141				1140
9288		-6 2950	9.0	F8	33 09.548	0.25	2	70.700	-6 34 16.52	0.10	2	70.700				9134
9289		-48 4815	7.83	F0	33 12.298	0.08	4	70.059	-48 39 56.26	0.06	4	70.059		13251		1141
9290		-11 2674	8.1	K0	33 19.570	0.01	2	70.734	-11 43 18.30	0.02	2	70.734				9135
9291		-0 2220	8.3	K0	33 22.214	0.16	2	71.584	-1 02 27.22	0.18	2	71.584				9136
9292		+5 2204	7.71	K2	9 33 27.505	0.10	2	70.771	+4 44 20.26	0.13	2	70.771		13257		9137
9293		-21 2854	8.3	K0	33 29.570	0.10	4	69.219	-21 43 23.69	0.14	4	69.219				9138
9294		-45 5270	8.07	K2	33 37.391	0.13	4	70.315	-45 53 16.27	0.28	4	70.315		13260		1142
9295		-14 2895	8.4	K2	33 39.247	0.04	2	70.635	-14 50 03.62	0.06	2	70.635				9139
9296		-72 844	8.6	K2	33 39.663	0.13	4	69.088	-73 16 48.13	0.10	4	69.088				19269
9297		-19 2753	8.6	K5	9 33 40.025	0.07	4	69.672	-20 19 43.00	0.08	4	69.672				9140
9298		-28 7439	8.81	K0	33 44.145	0.11	4	70.073	-29 11 10.27	0.09	4	70.073		13264		9141
9299		-25 7343	7.8	K5	33 55.754	0.03	4	70.592	-25 44 14.63	0.11	4	70.592				9142
9300		-58 1580	8.84	K5	33 57.140	0.07	4	69.091	-58 58 52.14	0.03	4	69.091		13275		9143
9301		-81 356	8.6	F5	34 00.259	0.11	4	69.512	-82 11 20.30	0.23	4	69.512				19270
9301	SP				9 34 00.199	0.22	4	70.822	-82 11 20.06	0.32	4	70.822				19270
9302		-16 2838	8.6	K5	34 04.029	0.22	2	71.324	-17 09 37.81	0.10	2	71.324				9144
9303		-61 1303	8.1	K5	34 10.257	0.12	5	69.517	-62 14 04.56	0.18	4	69.560				9145
9304		-43 5442	9.0	G5	34 12.878	0.10	4	70.203	-43 41 32.33	0.10	4	70.203				1143
9305		-63 1138	9.0	G0	34 13.378	0.06	4	69.624	-64 12 51.66	0.18	4	69.624				19271
9306		-21 2861	8.8	K0	9 34 15.008	0.01	4	70.125	-22 12 18.27	0.09	4	70.125				9146
9307		-33 6204	8.4	K2	34 16.754	0.09	4	70.148	-33 22 35.94	0.24	4	70.148				9147
9308		+17 2109	5.92	K0	34 17.173	0.07	6	70.300	+16 39 46.41	0.15	6	70.300	2766	13277		32766
9309*		-24 8263	6.52	F2	34 18.206	0.12	4	70.959	-24 28 42.72	0.04	5	70.619		13278		9148
9310		-51 3979	7.2	M0	34 32.149	0.11	4	70.099	-52 19 11.17	0.08	4	70.099				9149
9311		+7 2160	5.14	K0	9 34 34.277	0.06	5	70.190	+7 03 39.15	0.07	5	70.190	2767	13283	2293	32767
9312		-26 7269	7.78	K2	34 38.947	0.20	4	70.652	-26 37 58.70	0.15	4	70.652		13285		9150
9313		-57 2159	7.7	K0	34 40.830	0.28	4	70.128	-57 48 01.91	0.15	4	70.128				9151
9314		+1 2331	9.0	F0	34 43.225	0.07	2	70.662	+0 57 48.85	0.08	2	70.662				9152
9315		+16 2000	8.8	F8	34 54.142	0.09	3	70.824	+15 41 02.27	0.34	3	70.824				26629
9316		-75 596	8.1	K0	9 34 56.560	0.19	4	69.685	-75 26 44.00	0.08	4	69.685				19272
9316	SP				34 56.538	0.23	4	69.948	-75 26 43.83	0.54	4	69.948				19272
9317		-31 7458	5.63	K0	35 00.666	0.03	90	71.428	-31 57 11.54	0.03	91	71.427	1248	13292	2296	31248
9318		-48 4836	4.49	A5	35 01.773	0.09	8	71.032	-49 07 48.46	0.10	7	70.875	2768	13293	2297	32768
9319*		+2 2229	7.02	G5	35 05.801	0.07	2	70.724	+1 55 16.66	0.13	2	70.724		13297		9153
9320		-38 5736	8.6	A0	9 35 07.643	0.12	4	70.265	-38 28 09.59	0.07	4	70.265				9154
9321		-12 2951	8.6	G5	35 15.025	0.18	2	71.740	-13 04 18.64	0.08	2	71.740				9155
9322*		+0 2536	7.9	A2	35 20.994	0.24	2	71.702	-0 05 38.59	0.19	2	71.702				9156
9323		-8 2725	6.38	A0	35 24.315	0.41	2	71.677	-9 11 55.83	0.09	2	71.677		13307		9157
9324		-80 365	5.24	B3	35 25.381	0.04	6	70.503	-80 43 01.69	0.09	6	70.503		13308	2299	21022
9325		-44 5644	8.0	K2	9 35 30.018	0.14	4	70.219	-44 31 33.53	0.13	4	70.219				1144
9326		-0 2229	8.6	A0	35 39.468	0.23	3	72.098	-1 14 58.97	0.04	2	72.083				9158
9327		-31 7470	9.3	G5	35 39.887	0.10	4	69.696	-31 35 17.82	0.23	4	69.696				9159
9328		-4 2681	8.0	K2	35 41.832	0.27	2	71.140	-4 56 26.12	0.08	2	71.140				9160
9329		-7 2852	8.7	K2	35 50.043	0.10	2	70.616	-7 50 52.04	0.16	2	70.616				9161

9309 7.2m-7.2m, 0°2, 160°.

9319 A 7462AB, 7.0m-12.0m, 1°3, 60°.

9322 A 7464AB, 7.9m-11.7m, 1°5, 322°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
9330	+	5 2207	4.78	K0	9 35 50.614	0.02	120	70.952	+ 4 52 32.58	0.03	114	70.921	1249	13316	2302	81249
9331	-	34 6039	8.6	K2	35 56.148	0.12	4	71.405	-34 51 01.23	0.03	4	71.405				9162
9332	-	42 5462	5.50	K0	36 04.116	0.10	7	70.597	-42 57 52.95	0.07	6	70.488	2771	13319	2305	32771
9333	-	46 5357	8.5	K0	36 17.880	0.10	4	70.728	-47 09 42.98	0.10	4	70.728				1145
9334	-	60 1474	8.9	K0	36 19.624	0.14	4	69.667	-60 59 43.65	0.11	4	69.667				9163
9335	-	47 5081	9.0	K0	9 36 23.002	0.13	4	70.716	-47 42 24.87	0.21	4	70.716				1146
9336	-	56 2382	8.24	K0	36 28.997	0.15	4	69.721	-56 38 27.12	0.04	4	69.721		13329		9164
9337	-	55 2370	7.8	K0	36 30.660	0.14	4	69.737	-56 05 44.07	0.08	4	69.737				9165
9338	-	74 622	8.7	K5	36 31.104	0.06	4	69.603	-74 33 42.47	0.08	4	69.603				19273
9339	-	58 1593	7.6	G0	36 32.254	0.24	4	70.623	-59 10 25.36	0.16	4	70.623				9166
9340	-	3 2737	8.1	K2	9 36 36.441	0.11	2	72.268	- 4 09 06.72	0.10	2	72.268				9167
9341	-	17 2921	8.4	K2	36 37.438	0.29	2	71.342	-17 57 25.67	0.19	2	71.342				9168
9342	-	16 2848	6.87	F0	36 38.725	0.04	3	72.243	-17 23 52.01	0.08	3	72.243		13333		9169
9343	-	23 8588	8.8	K0	36 45.940	0.13	4	70.091	-23 46 38.73	0.26	4	70.091				9170
9344	-	68 968	8.9	K2	36 47.483	0.08	5	69.914	-68 42 25.31	0.14	4	70.057				19274
9345	-	2 2948	8.4	K5	9 36 49.834	0.12	3	72.249	- 2 26 39.00	0.43	3	72.249				9171
9346	-	77 534	8.7	G0	36 52.780	0.09	4	69.566	-78 07 11.03	0.17	4	69.566				19275
9346	SP				36 52.696	0.26	3	70.097	-78 07 10.43	0.31	3	70.097				19275
9347	+	3 2249	7.57	G5	37 03.643	0.07	2	70.746	+ 3 25 19.82	0.02	2	70.746			2308	9172
9348	-	38 5771	7.77	K0	37 04.848	0.07	4	70.125	-39 18 09.82	0.04	4	70.125		13337		9173
9349	+	4 2227	8.6	K0	9 37 05.219	0.07	2	71.658	+ 4 30 40.88	0.04	2	71.658				9174
9350	-	53 2679	8.5	G5	37 10.019	0.13	4	70.165	-54 05 54.97	0.11	4	70.165				9175
9351	-	50 4353	8.5	K0	37 16.997	0.09	4	70.619	-50 37 04.75	0.21	4	70.619				1147
9352	-	0 2231	4.10	K0	37 18.214	0.04	33	71.678	- 0 54 55.14	0.06	32	71.665	1250	13341	2309	31250
9353	-	10 2886	8.51	K2	37 19.370	0.03	2	72.265	-10 29 06.78	0.02	2	72.265		13342		9176
9354	-	42 5484	9.4	G5	9 37 21.927	0.40	5	70.907	-43 12 23.87	0.07	5	70.907				1148
9355	-	29 7678	7.7	K0	37 25.177	0.11	3	69.154	-29 38 39.67	0.15	4	69.180				9177
9356	-	18 2751	8.5	A2	37 28.088	0.06	2	71.807	-19 19 37.35	0.23	2	71.807				9178
9357	-	53 2687	8.8	K0	37 31.785	0.07	4	70.195	-53 49 34.87	0.11	4	70.195				9179
9358	-	0 2232	8.6	K0	37 36.676	0.07	2	71.659	- 0 48 30.82	0.39	2	71.659				9180
9359	-	12 2960	7.07	F5	9 37 38.093	0.12	2	71.766	-12 46 12.03	0.52	2	71.766		13346		9181
9360	-	37 5953	8.8	K0	37 38.376	0.24	3	70.538	-37 29 23.77	0.13	4	70.196				9182
9361	-	8 2733	7.6	F0	37 39.549	0.09	2	70.721	- 8 52 04.35	0.08	2	70.721				9183
9362	-	52 2663	7.48	K2	37 40.654	0.19	5	71.146	-52 42 58.98	0.19	5	71.146		13347		9184
9363	-	66 1033	7.64	F0	37 41.808	0.08	4	70.152	-66 37 57.53	0.17	4	70.152		13348		19276
9364	-	31 7505	8.9	K5	9 37 47.591	0.07	4	70.218	-32 05 18.65	0.19	4	70.218				9185
9365	-	56 2407	8.8	K0	37 50.026	0.08	5	71.577	-57 17 35.61	0.20	5	71.577				9186
9366	-	13 2917	4.96	B3	37 54.431	0.04	46	71.682	-14 06 17.08	0.06	42	71.658	364	13354	2311	30364
9367	-	60 1477	4.67	B9	37 57.773	0.07	6	70.594	-61 06 03.84	0.13	6	70.594		13355		21023
9368	-	33 6258	9.2	G5	37 58.655	0.07	4	70.196	-33 27 59.16	0.15	4	70.196				9187
9369	-	79 433	8.8	G0	9 37 59.136	0.06	5	70.148	-79 36 48.54	0.24	5	70.148				19277
9369	SP				37 59.088	0.24	4	70.139	-79 36 48.51	0.35	4	70.139				19277
9370	-	8 2735	9.1	F2	38 02.708	0.21	2	70.531	- 8 33 14.49	0.23	2	70.531				9188
9371	-	41 5258	8.3	K0	38 02.934	0.14	4	70.564	-41 48 23.88	0.20	4	70.564				1149
9372	-	33 6259	8.7	K2	38 03.892	0.09	4	70.681	-34 04 33.47	0.11	4	70.681				9189
9373	-	30 7775	7.43	K5	9 38 06.162	0.18	4	69.122	-30 41 39.29	0.10	4	69.122		13359		9190
9374	-	6 2974	7.6	F0	38 12.457	0.07	2	70.658	- 6 39 40.77	0.13	2	70.658				9191
9375	-	22 2682	8.5	K5	38 15.403	0.13	4	69.219	-23 07 29.08	0.13	4	69.219				9192
9376	-	25 7396	8.8	A0	38 17.925	0.15	3	69.509	-26 05 12.54	0.11	3	69.509				9193
9377	-	20 2981	8.5	K0	38 19.597	0.07	4	70.094	-21 21 14.29	0.19	4	70.094				9194
9378	+	18 2246	8.5	F5	9 38 19.728	0.09	4	70.925	+18 09 57.05	0.16	4	70.925				26632
9379	-	72 849	9.1	A2	38 20.173	0.06	4	70.205	-72 28 24.16	0.23	3	70.188				19278
9380	-	11 2699	8.7	A0	38 22.914	0.04	2	69.792	-12 04 54.84	0.13	2	69.792				9195
9381	+	10 2044	3.76	*	38 28.786	0.07	8	70.922	+10 07 13.82	0.08	8	70.922	365	13366	2313	30365
9382	-	35 5864	8.7	M0	38 29.534	0.13	4	70.125	-36 18 34.00	0.08	4	70.125				9196
9383	-	44 5708	9.0	K2	9 38 32.481	0.09	4	70.213	-44 22 25.76	0.14	4	70.213				1150
9384	-	35 5866	8.4	K5	38 33.255	0.13	4	70.258	-35 41 50.59	0.12	4	70.258				9197
9385	-	28 7525	8.5	K5	38 41.190	0.11	4	69.602	-28 37 09.49	0.10	4	69.602				9198
9386	+	5 2220	8.4	K0	38 44.077	0.01	2	69.815	+ 4 55 49.45	0.07	2	69.815				9199
9387	+	18 2247	8.7	F2	38 44.993	0.15	4	70.866	+18 06 53.89	0.15	4	70.866				26633
9388	-	47 5116	8.6	K5	9 38 45.594	0.07	4	70.152	-48 10 52.92	0.11	4	70.152				1151
9389	-	27 6828	8.5	K0	38 49.964	0.15	4	69.204	-27 37 26.02	0.15	4	69.204				9200
9390	-	87 155	9.5	K2	38 53.834	0.20	4	70.060	-87 45 07.86	0.23	4	70.060				19279
9390	SP				38 53.726	0.05	3	70.292	-87 45 07.37	0.10	3	70.292				19279
9391	-	61 1320	8.7	F8	39 06.548	0.08	4	68.618	-62 17 07.75	0.15	4	68.618				9201
9392	-	11 2702	8.0	F0	9 39 19.440	0.14	4	71.431	-12 23 07.76	0.14	3	70.882				9202
9393	-	6 2977	8.6	K2	39 20.265	0.13	4	71.086	- 6 31 57.97	0.35	4	71.086				9203
9394	-	3 2748	8.2	K5	39 32.797	0.28	2	70.576	- 3 46 15.56	0.11	2	70.576				9204
9395	-	14 2921	8.5	K0	39 33.141	0.02	2	70.636	-15 12 33.75	0.23	2	70.636				9205
9396	-	85 210	8.29	F2	39 36.996	0.21	4	70.048	-85 47 01.88	0.19	4	70.048		13384		19280
9396	SP				9 39 36.961	0.11	4	71.127	-85 47 02.10	0.07	4	71.127		13384		19280
9397	-	58 1612	8.37	K0	39 39.657	0.09	4	69.090	-58 54 38.16	0.08	4	69.090		13385		9206
9398	-	7 2867	8.2	G0	39 43.861	0.02	2	70.606	- 7 32 24.93	0.08	2	70.606				9207
9399	-	71 863	8.8	K7	39 52.821	0.15	4	68.677	-71 34 34.94	0.17	4	68.677				19281
9400	-	45 5347	8.59	G5	39 59.465	0.17	4	69.565	-45 46 04.29	0.08	4	69.565		13396		1152

9365 11.2m, 2.5, 250°.

9381 F5+A3.

CATALOG OF 23,001 STARS FOR 1950.0

365

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
9401	-42	5537	8.6	K2	9 40 00.957	0.11	4	70.071	-43 07 34.91	0.24	4	70.071				1153
9402	-63	1148	8.81	K5	40 03.421	0.16	4	69.051	-63 22 52.79	0.09	4	69.051	13398			9208
9403	-14	2925	8.6	G5	40 05.383	0.00	2	70.562	-14 45 32.97	0.00	2	70.562				9209
9404	-40	5431	9.1	G5	40 07.544	0.15	4	70.168	-40 23 41.31	0.05	4	70.168				1154
9405	-46	5420	8.5	K0	40 08.406	0.08	4	70.052	-46 25 31.74	0.11	4	70.052				1155
9406	-10	2894	8.7	K0	9 40 12.098	0.04	2	70.650	-10 39 06.71	0.08	2	70.650				9210
9407	-13	2927	8.6	K0	40 18.936	0.12	2	70.531	-13 53 51.70	0.22	2	70.531				9211
9408	-20	2993	8.7	K0	40 26.831	0.21	4	69.206	-20 45 17.82	0.18	4	69.206				9212
9409	-34	6097	6.41	B9	40 34.579	0.10	6	69.001	-35 16 21.33	0.13	6	69.001	2777	13404	2323	32777
9410	-67	1111	7.36	B8	40 39.697	0.04	6	68.642	-68 16 34.29	0.08	6	68.642	2778	13407		32778
9411	-15	2879	8.2	K0	9 40 55.823	0.05	2	70.718	-16 05 55.82	0.17	2	70.718				9213
9412	-48	4922	9.2	K0	40 56.913	0.14	4	70.103	-48 41 15.90	0.06	4	70.103				1156
9413	+14	2136	5.62	M0	41 00.647	0.05	18	70.612	+14 15 05.07	0.10	18	70.612	1252	13414	2326	31252
9414	-2	2962	8.5	G0	41 02.454	0.17	2	70.793	-3 07 47.86	0.21	2	70.793				9214
9415	-49	4627	8.0	K0	41 03.233	0.08	4	69.087	-49 54 47.48	0.06	4	69.087				1157
9416	+1	2352	8.5	F0	9 41 03.990	0.11	2	70.823	+0 42 59.31	0.03	2	70.823				9215
9417	-35	5893	8.1	K2	41 07.352	0.07	4	69.693	-35 25 27.48	0.20	4	69.693				9216
9418	-31	7563	8.3	K2	41 07.523	0.15	4	69.625	-31 20 21.63	0.05	4	69.625				9217
9419	-19	2795	6.70	K0	41 10.839	0.09	6	69.637	-20 08 10.01	0.10	6	69.637	2779	13418		9218
9420	-16	2871	8.4	K2	41 16.085	0.03	2	70.625	-17 12 10.25	0.12	2	70.625				9219
9421	-5	2881	8.4	M0	9 41 39.575	0.05	2	70.654	-5 57 02.40	0.30	2	70.654				9220
9422	-13	2935	8.5	K0	41 42.911	0.01	2	71.999	-13 29 36.69	0.34	2	71.999				9221
9423	-43	5563	9.1	K5	41 46.217	0.06	4	70.128	-44 00 59.17	0.07	4	70.128				1158
9424	-50	4425	9.0	G5	41 47.436	0.11	5	69.524	-51 17 52.51	0.04	4	69.572				1159
9425	+2	2243	8.3	K0	41 48.576	0.07	2	70.827	+2 11 53.63	0.19	2	70.827				9222
9426	-27	6881	4.98	F5p	9 41 58.156	0.02	124	71.174	-27 32 22.54	0.03	119	71.134	366	13425	2331	80366
9427	-3	2759	7.5	A2	41 59.766	0.13	2	71.678	-4 25 37.31	0.54	2	71.678				9223
9428	-53	2788	5.71	A0	42 00.096	0.14	6	70.468	-53 39 41.50	0.12	6	70.468		13426		21024
9429	+4	2236	7.6	K2	42 02.121	0.15	2	71.741	+3 35 00.18	0.31	2	71.741				9224
9430	-64	1065	9.1	K5	42 11.246	0.11	4	69.139	-65 01 30.83	0.14	4	69.139				19282
9431	-32	6689	9.2	G5	9 42 12.260	0.10	5	70.613	-33 05 49.64	0.32	5	70.613				9225
9432	-22	2706	8.1	K0	42 18.510	0.15	4	69.719	-23 07 51.78	0.10	4	69.719				9226
9433	-31	7592	8.9	K0	42 21.014	0.15	4	70.137	-32 08 47.97	0.18	4	70.137				9227
9434	-28	7578	8.3	K0	42 22.449	0.17	5	71.735	-29 18 11.08	0.18	6	71.323				9228
9435	+0	2551	7.7	K0	42 37.880	0.25	2	70.530	-0 14 02.62	0.10	2	70.530				9229
9436	-69	1105	8.7	K5	9 42 39.296	0.06	4	69.684	-70 02 59.75	0.10	4	69.684				19283
9437	-24	8415	8.8	K0	42 47.745	0.10	4	70.105	-24 49 03.65	0.09	4	70.105				9230
9438	-7	2882	7.6	K0	42 57.057	0.11	2	70.771	-8 15 05.23	0.01	2	70.771				9231
9439	+24	2129	3.12	G0p	43 00.915	0.11	8	70.957	+24 00 19.49	0.18	8	70.957	367	13443	2334	30367
9440	-41	5314	9.0	G5	43 01.366	0.16	4	70.133	-42 02 09.70	0.08	4	70.133				1160
9441	+19	2254	6.92	K0	9 43 05.464	0.00	3	70.519	+18 54 53.10	0.18	3	70.519	1253	13444	2335	31253
9442	-49	4654	8.7	K5	43 07.502	0.26	4	70.229	-50 15 23.72	0.12	4	70.229				1161
9443	-29	7758	6.50	B2	43 09.886	0.20	5	70.179	-29 58 18.48	0.20	4	69.701		13445		9232
9444	-10	2912	8.1	K2	43 15.054	0.07	2	69.763	-11 07 29.10	0.00	2	69.763				9233
9445	-1	2299	7.9	F5	43 15.340	0.09	2	71.657	-1 40 54.06	0.12	2	71.657		13447		9235
9446	-5	2890	9.0	K5	9 43 15.401	0.10	2	71.753	-6 18 59.13	0.31	2	71.753				9234
9447	-39	5798	9.1	F5	43 20.037	0.08	4	70.213	-39 54 58.98	0.17	4	70.213				9236
9448	-37	6041	7.7	K0	43 24.180	0.08	4	70.168	-37 30 09.45	0.12	4	70.168				9237
9449	-18	2772	8.4	G5	43 26.535	0.15	2	71.688	-18 28 08.03	0.00	2	71.688				9238
9450	+7	2181	5.99	M0	43 31.843	0.10	6	70.996	+6 56 24.32	0.04	6	70.996	2781	13452	2336	32781
9451	-1	2300	7.97	K0	9 43 31.976	0.01	2	70.837	-2 21 38.45	0.15	2	70.837			2337	9239
9452	-52	2772	8.2	G5	43 32.509	0.13	4	70.708	-53 12 13.04	0.17	4	70.708				9240
9453	-21	2902	8.5	K0	43 35.770	0.18	4	70.148	-21 31 27.51	0.14	4	70.148				9241
9454	-19	2812	8.6	K0	43 38.027	0.06	4	70.169	-20 12 30.24	0.12	4	70.169				9242
9455	-34	6132	8.7	K5	43 40.318	0.05	4	70.194	-34 25 21.32	0.19	4	70.194				9243
9456	-54	2669	8.4	K2	9 43 40.412	0.10	4	70.187	-54 31 19.65	0.19	4	70.187				9244
9457	-64	1076	7.5	K5	43 40.469	0.11	4	70.154	-64 25 20.50	0.14	4	70.154				19284
9458	-58	1635	7.39	G5	43 41.939	0.17	4	69.744	-59 14 41.03	0.17	4	69.744		13455		9245
9459	-25	7471	8.3	K0	43 44.992	0.14	4	70.358	-26 01 42.72	0.17	4	70.358				9246
9460	-19	2813	6.97	A0	43 46.433	0.05	2	70.635	-19 29 47.60	0.31	2	70.635		13458		9247
9461	+2	2246	5.69	F2	9 43 48.751	0.03	6	70.016	+2 01 02.63	0.11	6	70.016	2782	13459		32782
9462	-79	448	7.50	K0	43 50.093	0.14	4	69.883	-79 21 41.75	0.14	4	69.883				19285
9462 SP					43 49.830	0.13	4	69.865	-79 21 41.49	0.55	4	69.865				19285
9463	-13	2946	8.0	K2	43 50.428	0.22	2	69.818	-14 21 30.40	0.02	2	69.818			2338	9248
9464	-61	1333	3.6v	G0	43 52.316	0.03	95	71.176	-62 16 36.32	0.03	94	71.166	1254	13462	2339	31254
9465	-60	1497	8.3	K5	9 43 52.464	0.06	4	70.141	-60 48 28.22	0.18	4	70.141				9249
9466	-37	6051	9.4	F8	43 53.583	0.09	4	70.135	-38 19 49.21	0.20	4	70.135				9250
9467	-43	5600	7.35	K0	43 57.121	0.11	4	70.130	-43 26 50.69	0.12	4	70.130		13464		1162
9468	-26	7411	6.94	F2	44 07.037	0.11	4	69.618	-27 02 38.03	0.15	4	69.618		13469		9251
9469	-56	2502	8.3	G5	44 09.375	0.03	4	70.087	-56 46 13.28	0.12	4	70.087				9252
9470	-2	2977	7.5	F2	9 44 11.489	0.07	2	71.490	-2 58 48.18	0.22	2	71.490				9253
9471	-9	2920	8.2	F0	44 11.922	0.21	2	70.637	-10 01 17.93	0.34	2	70.637				9254
9472	-6	2997	8.6	K0	44 16.558	0.04	2	71.482	-6 53 41.54	0.25	2	71.482				9255
9473	-48	4983	8.5	K2	44 25.966	0.10	4	70.133	-48 53 39.83	0.11	4	70.133				1163
9474	-55	2507	8.4	K2	44 26.654	0.25	5	69.932	-55 33 43.15	0.11	4	70.081				9256

9464 3.6m to 4.8m.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
9475	+ 4	2245	8.5	K0	9 44 30.792	0.24	2	71.549	+ 3 38 52.83	0.19	2	71.549				9257
9476	-44	5846	5.68	B3	44 33.195	0.05	6	70.485	-44 31 23.44	0.12	6	70.485		13481		21025
9477	- 8	2763	8.7	K0	44 46.236	0.03	2	70.647	- 8 57 16.88	0.07	2	70.647				9258
9478	+ 2	2249	7.9	G0	44 47.449	0.13	2	70.622	+ 2 32 50.44	0.00	2	70.622				9259
9479	-30	7894	8.1	K0	44 50.671	0.01	3	68.460	-30 44 28.47	0.11	4	68.660				9260
9480	-16	2887	7.03	K5	9 44 51.704	0.05	2	69.699	-16 58 25.35	0.17	2	69.699		13488		9261
9481	-61	1336	8.3	K2	44 52.400	0.09	4	69.249	-61 43 53.16	0.10	4	69.249				9262
9482	+ 4	2247	8.9	K5	45 14.755	0.11	2	70.717	+ 4 26 54.10	0.01	2	70.717				9263
9483	-40	5513	8.5	G5	45 17.870	0.14	4	69.693	-41 13 07.71	0.08	4	69.693				1164
9484	-11	2722	8.5	K2	45 22.344	0.04	2	70.786	-12 20 51.36	0.33	2	70.786				9264
9485	- 7	2894	8.5	F8	9 45 22.909	0.02	2	71.302	- 8 15 37.64	0.04	2	71.302				9265
9486	-88	95	7.53	K2	45 23.945	0.08	4	70.069	-89 15 00.18	0.18	4	70.069		13496		19286
9486 SP					45 22.608	0.11	4	69.837	-89 14 59.54	0.22	4	69.837		13496		19286
9487	-27	6935	7.34	F8	45 26.461	0.19	4	69.139	-28 08 50.17	0.06	4	69.139		13500		9266
9488	-35	5937	8.3	K2	45 28.233	0.10	4	70.187	-36 06 35.62	0.13	4	70.187				9267
9489	-14	2951	8.6	A0	9 45 31.679	0.03	2	70.681	-14 42 07.12	0.01	2	70.681				9268
9490	-42	5626	8.0	K2	45 36.098	0.13	4	70.190	-43 01 14.21	0.12	4	70.190				1165
9491	- 5	2908	7.3	K2	45 36.667	0.01	2	70.663	- 5 40 14.51	0.12	2	70.663				9269
9492	-44	5875	8.9	K0	45 55.558	0.19	4	69.700	-45 18 49.57	0.18	4	69.700				1166
9493	-68	986	8.5	M2	45 58.648	0.09	4	69.622	-69 16 15.95	0.19	4	69.622				19287
9494	- 0	2250	8.3	F8	9 46 02.579	0.03	2	69.827	- 0 34 38.20	0.09	2	69.827				9270
9495	- 6	3005	8.1	A0	46 04.526	0.02	3	71.419	- 7 05 07.68	0.34	3	71.419		13511		9271
9496	-22	2724	8.7	A2	46 04.542	0.04	5	70.503	-22 35 42.32	0.08	5	70.503				9272
9497	-72	868	9.4	K0	46 07.881	0.05	4	69.647	-73 20 52.94	0.14	4	69.647				19288
9498	- 9	2928	6.98	A0	46 16.099	0.07	6	68.659	- 9 41 07.67	0.09	6	68.659	2783	13513		32783
9499	-46	5524	8.5	G5	9 46 17.845	0.10	4	70.172	-47 14 12.56	0.05	4	70.172				1167
9500	-76	598	5.35	K0	46 21.251	0.09	6	69.591	-76 32 35.41	0.16	6	69.591	2784	13514	2351	32784
9500 SP					46 21.312	0.07	6	70.232	-76 32 35.67	0.16	6	70.232	2784	13514	2351	52784
9501	-18	2792	7.8	K0	46 25.942	0.06	2	70.599	-19 04 48.23	0.17	2	70.599				9273
9502	- 9	2931	8.6	A0	46 26.418	0.12	2	70.640	-10 19 56.52	0.27	2	70.640				9274
9503	-35	5945	8.9	F5	9 46 26.496	0.11	4	70.576	-35 35 23.78	0.02	4	70.576				9275
9504	-21	2912	8.3	A0	46 30.560	0.12	4	69.148	-21 47 08.00	0.16	4	69.148				9276
9505	-30	4527	8.5	K0	46 32.147	0.07	4	69.608	-50 43 49.11	0.10	4	69.608				1168
9506*	-67	1141	8.7	G5	46 32.408	0.11	4	69.212	-67 49 21.33	0.14	4	69.212				19289
9507	- 4	2728	8.2	M0	46 34.454	0.05	2	70.719	- 4 38 32.08	0.17	2	70.719				9277
9508	-51	4196	8.1	K0	9 46 40.348	0.07	4	69.616	-52 16 57.80	0.07	4	69.616				9278
9509	-66	1085	7.78	K5	46 44.525	0.04	4	69.613	-66 37 47.26	0.18	4	69.613		13522		19290
9510	-32	6772	8.6	K2	46 48.385	0.06	4	70.599	-33 15 21.94	0.06	4	70.599				9279
9511	- 8	2771	7.01	K2	46 49.134	0.27	2	69.814	- 8 36 05.64	0.14	2	69.814		13523		9280
9512	-57	2340	8.0	M0	46 50.691	0.18	3	70.379	-57 25 31.03	0.12	3	70.379				9281
9513	-24	8487	7.4	K0	9 46 56.932	0.11	4	69.180	-24 24 44.19	0.04	4	69.180				9282
9514	+21	2113	6.01	F0	47 02.304	0.09	6	69.623	+21 24 47.87	0.12	6	69.623	2785	13528	2353	32785
9515	-56	2549	8.0	G5	47 03.403	0.13	4	69.083	-56 50 45.80	0.11	4	69.083				9283
9516	-44	5897	8.5	K2	47 03.653	0.07	4	70.655	-45 12 25.21	0.07	4	70.655				1169
9517	-17	2975	8.6	A5	47 07.330	0.14	2	71.551	-18 05 07.57	0.32	2	71.551				9284
9518	-35	5957	9.1	K1	9 47 16.597	0.11	4	70.170	-36 06 11.54	0.22	4	70.170				9285
9519	-16	2895	8.8	K0	47 21.056	0.25	2	71.655	-16 47 52.99	0.12	2	71.655				9286
9520	-34	6184	9.3	G5	47 27.272	0.05	4	70.202	-34 47 41.01	0.14	4	70.202				9287
9521	-36	5956	8.6	K5	47 32.658	0.09	4	70.196	-37 01 15.08	0.15	4	70.196				9288
9522	-28	7662	8.4	A0	47 34.260	0.03	4	70.923	-28 47 58.62	0.19	4	69.969				9289
9523	-41	5376	8.9	K2	9 47 34.437	0.12	4	70.204	-42 05 16.85	0.08	4	70.204				1170
9524	+ 0	2565	7.9	K0	47 38.610	0.15	2	70.785	+ 0 00 20.55	0.01	2	70.785				9290
9525*	-20	3026	8.6	A2	47 40.608	0.06	4	69.111	-20 53 43.47	0.10	4	69.111				9291
9526	- 1	2309	8.9	F2	47 52.064	0.00	2	71.693	- 1 48 15.84	0.15	2	71.693				9292
9527	+ 2	2255	8.2	K0	47 56.052	0.05	2	71.710	+ 2 03 43.10	0.06	2	71.710				9293
9528	-38	5952	8.0	K2	9 47 56.863	0.14	4	70.181	-38 43 07.26	0.08	4	70.181				9294
9529	-30	7938	8.2	K2	48 01.102	0.18	4	69.216	-31 07 54.16	0.14	4	69.216				9295
9530	-77	553	8.5	K5	48 01.776	0.05	4	70.060	-78 19 57.84	0.09	4	70.060				19291
9530 SP					48 01.671	0.26	5	70.615	-78 19 57.55	0.58	4	70.599				19291
9531	+ 4	2255	8.4	K2	48 02.600	0.06	2	70.877	+ 3 34 32.28	0.49	2	70.877				9296
9532	-52	2853	8.5	K0	9 48 03.398	0.06	4	69.718	-52 50 42.52	0.15	4	69.718				9297
9533	-49	4727	8.5	K0	48 11.200	0.15	4	70.219	-49 33 19.93	0.10	4	70.219				1171
9534	-11	2738	8.7	K0	48 16.388	0.18	2	72.204	-12 04 15.41	0.31	2	72.204				9298
9535	+ 1	2370	8.7	A2	48 23.210	0.35	2	71.685	+ 1 02 27.47	0.07	2	71.685				9299
9536	-75	622	9.0	A2	48 27.720	0.11	5	70.917	-75 55 43.20	0.29	5	70.917				19292
9536 SP					9 48 27.816	0.60	5	70.737	-75 55 43.56	0.54	4	70.750				19292
9537*	-74	642	9.9	G5	48 33.646	0.36	4	70.699	-74 36 10.11	0.16	4	70.699				19293
9538	-47	5296	9.3	G5	48 37.029	0.09		70.168	-47 44 08.85	0.10	4	70.168				1172
9539	-80	394	8.19	M0	48 38.752	0.04		70.092	-80 49 41.12	0.12	4	70.092		13556		19294
9539 SP					48 38.696	0.19		69.969	-80 49 41.07	0.10	3	69.969		13556		19294
9540	- 3	2794	6.00	A2	9 48 42.851	0.02	100	71.445	- 4 00 30.12	0.03	99	71.437	370	13558	2357	80370
9541	-58	1668	8.05	G5	48 44.947	0.08	4	70.159	-59 13 55.74	0.12	4	70.159		13561		9300
9542	-17	2980	7.9	F5	48 46.482	0.08	2	70.730	-18 25 27.25	0.05	2	70.730				9302
9543	- 1	2314	7.38	K2	48 46.772	0.20	2	71.151	- 1 37 22.01	0.16	2	71.151		13562	2358	9301
9544	-30	7951	8.2	K2	48 49.623	0.18	4	69.174	-30 42 07.30	0.12	4	69.174				9303

9506 8.9m-10.6m, 0°7', 250°.
 9525 9.1m-9.7m, 0°6', 340°.

9537 11.3m, 4°8', 253°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
9545	-31	7705	8.9	K0	9 48 57.343	0.16	4	70.604	-32 17 23.63	0.17	4	70.604				9304
9546	-50	4572	8.5	K2	49 02.846	0.26	4	70.883	-51 16 06.09	0.13	4	70.883				1173
9547	-14	2963	4.29	K0	49 04.323	0.11	6	70.038	-14 36 41.17	0.08	6	70.038	2786	13570	2361	32786
9548	-52	2876	8.4	K0	49 04.627	0.07	4	70.637	-53 19 04.19	0.21	4	70.637				9305
9549	-14	2964	8.4	K0	49 09.260	0.15	2	72.212	-15 08 57.07	0.49	2	72.212				9306
9550	-76	600	8.0	K0	9 49 10.717	0.14	5	70.760	-76 46 46.47	0.14	5	70.760				19295
9550	SP				49 10.639	0.12	4	69.842	-76 46 45.72	0.23	4	69.842				19295
9551	-25	7545	8.5	K0	49 13.613	0.15	4	70.072	-25 39 05.97	0.15	4	70.072				9307
9552	-10	2940	6.81	M0	49 14.511	0.31	3	72.373	-11 06 18.56	0.22	3	72.373		13572		9308
9553	-26	7481	8.7	K0	49 19.209	0.04	4	70.847	-27 18 54.32	0.08	4	70.847				9309
9554	-45	5499	5.72	K0	9 49 23.292	0.03	69	70.732	-45 57 32.84	0.04	67	70.732	1256	13574	2362	31256
9555	-13	2967	7.9	K0	49 24.396	0.12	2	71.643	-13 50 36.26	0.15	2	71.643				9310
9556	-39	5900	8.5	K0	49 28.891	0.10	4	70.650	-39 26 56.89	0.23	4	70.650				9311
9557	-9	2945	8.1	K2	49 35.487	0.10	2	72.088	-9 36 43.25	0.32	2	72.088				9312
9558	-34	6215	8.9	F5	49 35.612	0.10	4	71.131	-35 01 55.71	0.10	4	71.131				18445
9559	-15	2920	6.31	K0	9 49 36.282	0.17	2	71.203	-16 17 56.00	0.05	2	71.203		13580		9313
9560	-55	2593	8.0	K5	49 37.956	0.16	4	70.628	-56 01 55.47	0.08	4	70.628				9314
9561	+0	2573	6.29	K0	49 38.166	0.12	5	71.805	+0 18 40.15	0.11	5	71.805	2788	13583		32788
9562	-58	1673	5.78	K2	49 38.519	0.06	6	70.045	-59 11 25.32	0.14	6	70.045	2789	13584		32789
9563	-48	5065	9.5	K0	49 40.811	0.08	4	70.658	-48 43 07.22	0.21	4	70.658				1174
9564	-63	1201	7.9	K0	9 49 43.527	0.07	5	71.399	-64 00 59.70	0.15	4	70.979				9315
9565	-6	3016	8.3	K5	49 51.663	0.16	2	71.285	-7 21 48.43	0.00	2	71.285				9316
9566	+26	2019	4.10	K0	49 55.079	0.01	2	69.049	+26 14 34.38	0.49	2	69.049	371	13590	2364	30371
9567	-2	2995	9.0	K0	49 56.967	0.15	2	71.330	-2 45 47.71	0.20	2	71.330				9317
9568	-5	2927	8.3	K0	50 08.827	0.01	2	70.866	-5 54 32.65	0.40	2	70.866				9318
9569	+3	2283	8.0	A2	9 50 15.719	0.10	2	71.741	+3 11 50.16	0.45	2	71.741				9319
9570	-58	1679	8.0	K5	50 33.967	0.09	4	70.160	-58 36 24.74	0.04	4	70.160				9320
9571*	-26	7505	6.32	F8	50 43.133	0.14	4	69.647	-27 05 48.81	0.15	4	69.647		13599		9321
9572	-61	1353	8.6	F5	50 48.134	0.14	4	70.208	-62 11 11.43	0.19	4	70.208				9322
9573	-76	602	8.9	K2	50 57.879	0.10	5	70.694	-77 05 17.77	0.05	5	70.694				19296
9573	SP				9 50 57.729	0.35	4	70.892	-77 05 17.36	0.19	4	70.892				19296
9574	-69	1127	8.8	G5	51 00.830	0.06	4	70.705	-69 33 11.15	0.12	4	70.705				19297
9575	-17	2994	7.6	M1	51 00.931	0.05	3	70.331	-17 41 23.77	0.10	2	70.853				9323
9576	-22	2751	8.5	K0	51 05.046	0.10	3	70.454	-22 32 04.14	0.08	4	70.156				9324
9577	-46	5587	8.17	G5	51 07.988	0.10	4	70.650	-46 27 05.10	0.14	4	70.650		13609		1175
9578	-3	2802	7.3	B9	9 51 11.234	0.08	2	70.667	-3 37 32.43	0.09	2	70.667				9325
9579	-23	8831	8.0	K5	51 13.344	0.08	4	70.583	-23 52 20.95	0.08	4	70.583				9326
9580	-29	7886	8.7	F8	51 19.792	0.11	5	70.574	-29 30 03.88	0.15	5	70.574				9327
9581	-51	4280	8.5	K2	51 25.102	0.17	4	70.226	-51 50 17.95	0.14	4	70.226				1176
9582	-67	1159	9.1	K2	51 31.162	0.18	6	70.509	-67 51 23.96	0.37	5	70.744				19298
9583	-19	2856	8.3	G5	9 51 35.900	0.32	2	70.844	-19 35 31.70	0.08	2	70.844				9328
9584	-67	1161	8.7	G5	51 39.345	0.09	4	70.173	-68 10 00.28	0.14	4	70.173				19299
9585	-79	457	6.54	A0	51 47.598	0.02	212	71.090	-79 49 31.52	0.02	208	71.063	2791	13624	2366	62791
9585	SP				51 47.578	0.03	196	70.939	-79 49 31.75	0.05	189	70.899	2791	13624	2366	72791
9586	-24	8551	8.2	K2	51 49.645	0.06	4	70.577	-25 13 58.00	0.10	4	70.577				9329
9587	-25	7585	5.00	K0	9 51 55.970	0.13	6	69.303	-25 41 45.89	0.10	6	69.303	2792	13627		32792
9588	+1	2381	7.9	F8	52 00.020	0.23	2	71.978	+1 10 53.48	0.09	2	71.978				9330
9589	-1	2319	8.3	K0	52 00.717	0.02	2	71.274	-2 22 50.48	0.25	2	71.274				9331
9590	-4	2752	8.6	K2	52 06.492	0.13	2	71.324	-4 50 08.66	0.04	2	71.324				9332
9591	-12	3021	7.02	F8	52 08.793	0.33	2	71.343	-12 42 45.92	0.18	2	71.343		13630		9333
9592	-30	8005	8.6	K2	9 52 08.988	0.09	4	70.861	-31 10 01.99	0.11	4	70.861				9334
9593	-35	6006	8.7	K0	52 09.163	0.13	4	70.131	-35 33 17.31	0.15	4	70.131				9335
9594	+4	2263	8.7	F5	52 11.239	0.14	2	72.253	+4 15 36.37	0.02	2	72.253				9336
9595f	-44	5987	5.89	B5	52 19.244	0.15	6	70.606	-45 02 47.86	0.13	6	70.606		13637		21026
9596	-37	6152	8.8	K2	52 23.273	0.11	4	70.204	-37 57 01.18	0.06	4	70.204				9337
9597	-18	2810	5.16	M0	9 52 30.526	0.02	75	71.045	-18 46 18.87	0.04	73	71.002	373	13644	2367	80373
9598	-61	1359	8.00	A2	52 30.637	0.10	5	70.789	-61 52 57.84	0.16	5	70.789		13645		9338
9599*	-64	1118	8.2	K2	52 30.695	0.07	4	69.739	-64 46 03.48	0.12	4	69.739				19300
9600	-0	2268	8.8	G5	52 33.479	0.22	2	72.287	-1 08 56.10	0.29	2	72.287				9339
9601*	-29	7906	8.4	F5	52 34.191	0.11	4	70.693	-29 28 14.14	0.28	4	70.693				9340
9602	-39	5948	8.0	K0	9 52 34.916	0.03	4	70.596	-39 58 33.08	0.08	4	70.596				9341
9603	-15	2929	6.67	G0	52 36.530	0.06	2	71.789	-15 57 24.15	0.12	2	71.789		13647		9342
9604	-34	6259	9.3	K0	52 37.388	0.06	4	70.761	-34 36 22.39	0.09	4	70.761				9343
9605	-26	7529	8.8	K0	52 38.254	0.25	4	70.378	-27 01 23.42	0.07	4	70.378				9344
9606	-49	4791	8.8	K2	52 43.747	0.13	4	70.094	-50 01 11.27	0.10	4	70.094				1177
9607	-10	2948	7.56	K2	9 52 46.632	0.04	2	72.257	-10 47 49.40	0.09	2	72.257		13651		9345
9608	-42	5743	8.0	K2	52 47.878	0.09	4	70.687	-43 18 34.27	0.12	4	70.687				1178
9609	-35	6013	8.5	K0	52 48.451	0.19	4	70.735	-35 23 36.09	0.16	4	70.735				9346
9610	-27	7047	7.7	K0	52 57.474	0.14	4	69.686	-28 17 57.21	0.13	4	69.686				9347
9611	-32	6879	7.51	G5	53 01.129	0.08	4	70.582	-33 07 32.96	0.09	4	70.582		13658		9348
9612	-0	2270	8.2	K0	9 53 01.958	0.01	2	72.175	-0 53 18.07	0.06	2	72.175				9349
9613	-4	2757	7.3	K2	53 06.194	0.11	2	72.186	-4 44 18.71	0.20	2	72.186				9350
9614	-50	4639	8.5	K2	53 09.117	0.14	4	70.191	-50 45 36.97	0.14	4	70.191				1179
9615	-38	6019	9.0	K5	53 13.370	0.14	4	70.633	-38 41 20.68	0.16	4	70.633				9351
9616	-53	3024	9.0	K0	53 16.020	0.22	5	70.574	-54 09 05.50	0.06	5	70.574				9352

9571 6.3m-10.3m, 1^h2, 5^h.
 9595 SDS, 8.02m, 4^h4, 23^h.

9599 8.5m-11.1m, 1^h0, 17^h.
 9601 9.1m-10.9m, 0^h9, 10^h.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
9617	- 8	2797	6.54	A3	9 53 16.602	0.07	2	71.751	- 8 35 56.22	0.05	2	71.751		13665		9353
9618	+ 3	2290	8.5	A0	53 24.091	0.31	2	71.640	+ 3 02 12.21	0.23	2	71.640				9354
9619	-60	1529	7.7	K0	53 25.682	0.05	4	70.123	-60 24 11.84	0.11	4	70.123				9355
9620	-32	6883	8.8	K5	53 35.141	0.17	4	70.728	-32 20 54.80	0.06	4	70.728				9356
9621	-36	6025	8.5	K0	53 37.010	0.07	4	70.738	-36 39 35.71	0.22	4	70.738				9357
9622	- 6	3033	7.03	K0	9 53 38.873	0.03	42	71.530	- 7 24 26.86	0.05	40	71.593	1257	13674	2371	31257
9623	-44	6005	8.5	K0	53 40.871	0.15	4	70.777	-44 36 32.01	0.08	4	70.777				1180
9624	-42	5759	8.5	G5	53 45.580	0.16	5	70.994	-42 45 14.13	0.21	4	70.719				1181
9625	+ 9	2262	5.93	K0	53 46.891	0.05	6	69.427	+ 9 10 15.66	0.04	6	69.427	2794	13679	2372	32794
9626	-56	2658	8.1	K0	53 51.843	0.06	4	69.738	-56 41 53.18	0.07	4	69.738				9358
9627	-24	8593	8.1	K2	9 53 57.333	0.06	3	69.187	-24 50 31.80	0.13	4	69.206				9359
9628	-40	5626	6.34	M0	54 01.447	0.10	6	68.704	-40 35 10.93	0.14	6	68.704	2795	13685	2374	32795
9629	-12	3031	7.03	K2	54 05.468	0.11	2	70.741	-13 13 32.41	0.04	2	70.741		13689		9360
9630	+ 0	2588	8.4	K5	54 05.602	0.15	3	71.344	- 0 13 23.70	0.11	2	71.330				9361
9631	-40	5628	8.6	K0	54 08.878	0.09	4	70.713	-40 32 54.05	0.06	4	70.713				1182
9632	-53	3045	8.0	K2	9 54 11.811	0.07	4	69.773	-53 49 39.67	0.17	4	69.773				9362
9633	-20	3052	8.1	K2	54 13.583	0.07	4	69.710	-21 00 59.67	0.09	4	69.710				9363
9634	+ 4	2268	8.6	K2	54 13.724	0.20	2	71.343	+ 4 12 22.49	0.17	2	71.343				9364
9635	-30	8046	8.6	K0	54 14.897	0.08	4	70.369	-30 38 13.64	0.09	4	70.369				9365
9636	-47	5378	8.8	G5	54 18.758	0.07	5	70.349	-47 27 38.53	0.13	4	70.583				1183
9637	-29	7937	7.9	K0	9 54 22.329	0.09	4	69.624	-29 53 05.27	0.09	4	69.624				9366
9638	-45	5588	8.5	K0	54 23.204	0.19	4	70.176	-46 09 08.82	0.10	4	70.176				1184
9639	-13	2988	8.8	K5	54 23.547	0.18	2	71.327	-14 09 08.67	0.13	2	71.327				9367
9640	-32	6895	5.86	K0	54 24.335	0.05	6	71.055	-33 10 49.25	0.13	6	71.055	2796	13695		32796
9641p	-25	7622	6.23	A2	54 30.402	0.03	4	69.176	-26 18 41.35	0.20	4	69.176		13697		9368
9642	-56	2673	9.0	F8	9 54 30.793	0.05	4	70.574	-57 15 20.39	0.12	4	70.574				9369
9643	-50	4662	6.47	B3	54 31.174	0.08	6	70.664	-51 05 52.21	0.09	6	70.664	2797	13698	2375	32797
9644	-16	2924	8.7	K5	54 41.229	0.40	2	71.197	-17 22 20.22	0.32	2	71.197				9370
9645	-16	2926	9.0	F2	54 49.503	0.05	2	71.729	-16 30 45.10	0.15	2	71.729				9371
9646	+ 2	2271	8.7	A5	54 51.496	0.14	2	72.170	+ 2 20 44.61	0.37	2	72.170				9372
9647	- 7	2931	8.4	K2	9 54 58.074	- -	1	70.269	- 7 56 12.26	- -	1	70.269				9373
9648	+ 2	2272	8.6	K0	55 03.079	0.19	2	71.520	+ 1 52 40.79	0.06	2	71.520				9374
9649	-53	3075	3.70	B5	55 06.198	0.02	117	71.044	-54 19 45.09	0.03	114	71.031	375	13711	2377	30375
9650*	- 1	2329	6.72	G5	55 11.221	0.01	2	71.678	- 1 42 10.41	0.15	2	71.678		13712		9375
9651	- 9	2968	8.7	K2	55 11.433	0.20	2	71.015	- 9 30 23.98	0.24	2	71.015				9376
9652	-70	953	6.42	B0	9 55 17.809	0.11	6	70.318	-71 09 02.97	0.09	6	70.318	2799	13716		32799
9652 SP					55 17.765	0.08	35	71.575	-71 09 03.08	0.19	34	71.569	2799	13716		52799
9653	-52	2980	6.15	B3	55 22.039	0.04	6	70.592	-52 24 00.03	0.06	6	70.592		13718		21027
9654	-71	890	9.3	K5	55 24.653	0.11	4	70.562	-72 13 48.84	0.19	4	70.562				19301
9655	+13	2183	5.18	A0	55 32.042	0.06	5	70.477	+12 41 02.51	0.17	5	70.477	2800	13724	2380	32800
9656	-28	7784	8.5	K2	9 55 40.799	0.09	4	69.174	-28 30 53.26	0.10	4	69.174				9377
9657	-12	3039	8.0	K5	55 42.223	0.09	2	70.703	-12 53 24.34	0.09	2	70.703				9378
9658	-51	4342	8.5	K0	55 42.734	0.10	5	70.386	-51 40 42.90	0.11	5	70.386				1185
9659	-23	8883	8.6	K0	55 50.311	0.14	4	69.599	-23 36 25.97	0.06	4	69.599				9379
9660	-38	6058	8.2	K5	55 51.856	0.11	4	70.157	-39 20 07.93	0.06	4	70.157				9380
9661	-62	1233	6.49	K0	9 55 53.534	0.11	6	69.697	-64 15 03.74	0.24	6	69.697	2801	13728		32801
9662	-68	1011	6.34	B5	55 55.439	0.09	6	70.789	-68 51 46.54	0.06	6	70.789		13729	2382	21028
9663	- 2	3022	8.3	G5	55 57.842	0.04	4	70.431	- 3 23 40.84	0.07	3	70.813				9381
9664	- 6	3045	8.6	K0	56 02.844	0.14	3	72.084	- 6 56 45.73	0.45	3	72.084				9382
9665	-13	2996	7.4	K5	56 05.234	0.20	2	71.330	-13 42 06.62	0.07	2	71.330				9383
9666	-69	1134	9.1	M5	9 56 08.499	0.53	4	69.801	-70 20 42.39	0.13	4	69.801				19302
9667	-41	5490	8.0	K2	56 12.070	0.15	4	70.635	-41 57 21.67	0.18	4	70.635				1186
9668	-35	6046	8.7	G5	56 12.654	0.08	4	70.258	-35 49 02.81	0.13	4	70.258				9384
9669	+ 1	2386	8.9	K0	56 19.036	0.32	3	71.886	+ 0 35 47.78	0.30	2	71.783				9385
9670	-21	2957	8.3	K0	56 20.442	0.11	4	69.603	-22 04 55.10	0.19	4	69.603				9386
9671	-62	1375	8.9	K0	9 56 23.626	0.02	4	69.753	-62 31 18.81	0.13	4	69.753				9387
9672	- 2	3024	7.40	F2	56 29.803	0.28	2	69.818	- 2 46 53.79	0.01	2	69.818		13738		9388
9673	-49	4844	9.0	G5	56 34.791	0.02	4	70.682	-49 53 02.61	0.24	4	70.682				1187
9674	-35	6050	5.25	F0	56 43.209	0.03	55	71.004	-35 39 03.92	0.04	53	71.034	377	13741	2387	30377
9675	+30	1946	5.86	K0	56 43.312	0.05	6	69.703	+29 53 07.51	0.16	6	69.703	2803	13742		32803
9676	-15	2949	8.3	A0	9 56 44.492	0.06	3	72.133	-15 46 18.16	0.42	3	72.133				9389
9677	-65	1199	8.5	K5	56 45.406	0.09	3	69.851	-66 19 22.48	0.13	3	69.851				19303
9678	+ 3	2301	8.7	A0	56 47.265	0.21	2	70.717	+ 3 12 13.99	0.12	2	70.717				9390
9679	-19	2884	6.94	K2	56 57.507	0.06	6	69.058	-20 07 00.37	0.10	6	69.058	2804	13744		9391
9680	-47	5414	8.0	K0	57 02.464	0.07	4	70.813	-48 15 00.62	0.23	4	70.813				1188
9681	-33	6565	9.0	- -	9 57 03.681	0.04	4	70.179	-33 26 15.82	0.07	4	70.179				9392
9682	- 7	2936	8.1	G5	57 04.235	0.04	2	70.661	- 7 36 59.42	0.18	2	70.661				9393
9683	+ 4	2276	6.63	A5	57 07.384	0.03	37	71.515	+ 3 37 28.85	0.06	36	71.522	376	13746	2389	30376
9684	-10	2965	8.3	K5	57 09.741	0.01	2	71.684	-10 27 41.99	0.25	2	71.684				9394
9685	-44	6062	8.49	K0	57 10.699	0.02	4	70.209	-44 45 58.13	0.10	4	70.209		13747		1189
9686	+16	2055	8.5	G	9 57 12.205	0.11	4	70.181	+16 24 34.29	0.04	4	70.181				26659
9687	-17	3026	8.0	A2	57 21.782	0.26	4	72.202	-18 25 28.44	0.11	4	72.202				9395
9688	-44	6064	6.94	A0	57 26.077	0.08	6	71.001	-44 42 54.88	0.05	6	71.001	2806	13750		32806
9689	+18	2302	8.9	K0	57 30.317	0.18	4	70.982	+17 42 00.76	0.14	4	70.982				26660
9690	- 4	2775	7.7	K2	57 33.004	0.20	3	71.777	- 4 46 20.99	0.42	2	71.621				9396

9641 A 7591, 10.6m, 3°4, 158°.

9650 A 7596, 6.7m-10.3m, 1°9, 22°.

CATALOG OF 23,001 STARS FOR 1950.0

369

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
9691	+ 8	2301	4.89	M0	9 57 34.287	0.02	101	71.074	+ 8 17 05.23	0.03	100	71.043	378	13755	2390	80378
9692*	- 6	3054	8.3	P0	57 43.392	0.20	2	70.862	- 6 27 54.81	0.03	2	70.862				9397
9693	-71	896	8.5	G5	57 43.415	0.10	5	69.554	-71 26 58.31	0.06	4	69.609				19304
9694	-31	7845	8.46	K0	57 43.682	0.06	5	70.447	-32 19 20.02	0.02	4	70.705		13760		9398
9695	- 0	2277	9.0	K0	57 44.396	0.28	2	70.871	- 0 49 00.22	0.55	2	70.871				9399
9696	-48	5203	8.5	K0	9 58 01.817	0.11	4	70.612	-48 42 40.15	0.13	4	70.612				1190
9697	-41	5516	8.0	K2	58 03.549	0.13	4	70.667	-42 13 48.07	0.19	4	70.667				1191
9698	- 8	2821	7.9	K2	58 04.704	0.02	2	70.709	- 9 22 19.17	0.34	2	70.709				9400
9699	-36	6067	8.2	G5	58 09.249	0.09	4	70.198	-36 29 56.64	0.19	4	70.198				9401
9700	-45	5653	9.0	K2	58 11.915	0.08	4	70.709	-45 47 16.91	0.22	4	70.709				1192
9701	-81	390	8.38	A2	9 58 14.084	0.19	4	69.144	-81 35 48.99	0.16	4	69.144		13764		19305
9701 SP					58 13.859	0.18	4	70.360	-81 35 49.24	0.29	4	70.360		13764		19305
9702	-26	7595	8.61	K5	58 19.448	0.11	4	68.680	-26 54 53.08	0.05	4	68.680		13766		9402
9703*	- 3	2831	8.6	A5	58 24.150	0.10	2	69.684	- 4 01 26.76	0.01	2	69.684				9403
9704	-65	1214	8.0	K2	58 31.015	0.13	4	69.609	-65 47 02.82	0.14	4	69.609				19306
9705	-50	4729	8.9	K0	9 58 42.528	0.11	4	69.676	-50 51 00.56	0.18	4	69.676				1193
9706	-83	327	9.1	A3	58 43.869	0.09	4	70.098	-83 25 14.43	0.17	4	70.098				19307
9706 SP					58 43.497	0.18	4	70.460	-83 25 14.14	0.32	4	70.460				19307
9707	-58	1781	7.8	K2	58 47.778	0.15	4	69.648	-58 32 15.12	0.04	4	69.648				9404
9708	-40	5695	8.5	K5	58 55.072	0.08	4	70.576	-40 39 27.24	0.14	4	70.576				1194
9709	-34	6342	8.2	K5	9 58 59.370	0.11	4	70.107	-34 23 20.50	0.18	4	70.107				9405
9710	-43	5836	8.8	K2	59 00.572	0.10	4	70.167	-43 31 53.64	0.27	4	70.167				1195
9711	-31	7869	9.2	K2	59 01.993	0.05	4	69.127	-31 26 45.44	0.08	4	69.127				9406
9712	-67	1179	7.9	G5	59 04.463	0.20	4	69.601	-67 54 32.37	0.24	4	69.601				19308
9713	+ 1	2392	8.9	K0	59 05.622	0.01	2	69.678	+ 1 22 21.07	0.26	2	69.678				9407
9714	-59	1632	7.8	K0	9 59 18.689	0.09	4	69.906	-59 59 05.73	0.23	4	69.906		13780		9408
9715	- 1	2338	8.8	F8	59 19.685	0.07	2	69.818	- 2 01 46.49	0.17	2	69.818				9409
9716	-37	6230	9.27	M3	59 22.893	0.13	4	69.697	-37 50 59.20	0.18	4	69.697		13781		9410
9717	-30	8116	8.8	G5	59 23.622	0.12	4	69.167	-30 33 41.06	0.14	4	69.167				9411
9718	-23	8928	6.88	G5	59 25.204	0.06	4	69.642	-23 33 55.48	0.03	4	69.642		13782		9412
9719	-12	3055	7.92	K0	9 59 25.513	0.07	2	70.678	-12 39 26.12	0.42	2	70.678		13783		9413
9720	-25	7688	7.9	K0	59 27.538	0.14	4	70.403	-26 13 22.50	0.11	4	70.403				9414
9721	-54	3020	8.5	K2	59 28.997	0.12	4	69.663	-54 28 34.17	0.16	4	69.663				9415
9722	-13	3013	7.8	K5	59 32.741	0.07	2	70.713	-14 09 04.50	0.07	2	70.713				9416
9723	-60	1584	8.1	K0	59 42.731	0.09	5	69.621	-60 44 26.40	0.07	4	69.693				9417
9724	-38	6110	8.0	F2	9 59 44.172	0.09	4	69.618	-38 40 44.45	0.12	4	69.618				9418
9725	-19	2895	9.0	F5	59 49.651	0.28	2	70.575	-19 31 29.69	0.38	2	70.575				9419
9726	+22	2164	5.59	B3	10 00 01.831	0.12	6	69.378	+22 11 28.19	0.14	6	69.378	2807	13796	2394	32807
9727	-14	3010	8.4	G5	00 03.379	0.17	2	70.545	-14 53 25.25	0.09	2	70.545				9420
9728	-46	5739	8.5	K0	00 12.617	0.11	4	69.639	-46 32 28.11	0.18	4	69.639				1196
9729	- 5	2976	8.7	K2	10 00 12.763	0.05	2	70.640	- 6 15 41.95	0.14	2	70.640				9421
9730	- 0	2285	7.02	K0	00 16.016	0.00	2	70.627	- 0 49 30.83	0.06	2	70.627		13804	2395	9422
9731	-52	3108	8.7	K0	00 25.272	0.08	4	69.206	-52 34 39.26	0.02	4	69.206				9423
9732	-21	2973	8.0	K5	00 27.273	0.10	4	69.691	-21 51 29.87	0.04	4	69.691				9424
9733	-31	7896	8.2	K0	00 31.131	0.07	4	70.143	-31 43 42.16	0.24	4	70.143				9425
9734	-29	8034	6.62	K0	10 00 34.975	0.13	6	69.034	-30 20 08.13	0.14	6	69.034	2808	13810		32808
9735	- 8	2833	7.9	G0	00 37.227	0.08	2	70.612	- 8 38 39.86	0.24	2	70.612				9426
9736	- 5	2979	8.8	A5	00 43.348	0.14	2	70.733	- 6 23 46.65	0.22	2	70.733				9427
9737	-55	2826	7.34	G5	00 50.430	0.14	4	69.175	-56 00 52.28	0.24	4	69.175		13813		9428
9738	-20	3088	7.8	K0	00 51.421	0.08	4	70.064	-20 41 18.01	0.31	4	70.064				9429
9739	-38	6129	7.45	K0	10 00 58.738	0.01	4	69.662	-39 10 53.00	0.12	4	69.662		13818		9430
9740	+ 4	2283	7.45	K0	01 02.763	0.09	2	69.681	+ 4 12 50.84	0.12	2	69.681		13819		9431
9741	+ 2	2284	8.7	K5	01 06.936	0.36	2	70.784	+ 2 20 14.07	0.18	2	70.784				9432
9742	-29	8046	8.3	A2	01 15.457	0.18	4	69.758	-30 00 26.86	0.11	4	69.758				9433
9743	- 9	2984	7.8	G0	01 20.981	0.29	2	70.778	- 9 54 36.65	0.26	2	70.778				9435
9744	- 7	2948	8.9	F5	10 01 20.991	0.10	2	71.307	- 8 08 35.30	0.06	2	71.307				9434
9745	- 6	3066	8.9	K2	01 26.964	0.08	3	71.855	- 7 25 09.21	0.08	2	72.152				9436
9746	+ 3	2311	6.42	F2	01 32.944	0.13	2	71.650	+ 3 26 40.13	0.10	2	71.650		13836		9437
9747	-18	2832	8.7	A2	01 33.052	0.16	2	70.674	-18 38 31.14	0.31	2	70.674				9438
9748	-24	8716	8.5	K5	01 36.245	0.06	3	69.986	-25 13 32.22	0.22	4	69.805				9439
9749	-17	3047	5.78	A0	10 01 39.736	0.31	2	70.674	-17 51 31.14	0.21	2	70.674		13839		9440
9750	-27	7165	7.7	F8	01 40.072	0.10	4	70.939	-28 15 22.36	0.07	4	70.939				9441
9751	-42	5887	9.2	G5	01 43.503	0.09	5	69.609	-42 58 56.65	0.21	4	69.657				1197
9752	-59	1771	7.9	K0	01 43.745	0.12	4	69.580	-59 42 20.10	0.07	4	69.580				9442
9753	-65	1228	8.5	K5	01 46.566	0.05	4	69.077	-65 26 55.80	0.23	4	69.077				19309
9754	- 6	3068	7.46	G5	10 01 56.805	0.16	2	69.709	- 6 58 25.12	0.04	2	69.709		13843	2400	9443
9755	-21	2976	7.8	K5	01 58.652	0.02	4	70.663	-22 18 58.07	0.04	4	70.663			2401	9444
9756	-62	1418	8.5	K0	02 01.777	0.11	4	68.649	-63 06 50.66	0.06	4	68.649				9445
9757	-23	8973	5.80	F0	02 02.067	0.02	131	71.373	-24 02 33.84	0.02	129	71.360	1260	13848	2402	31260
9758	-18	2835	8.4	A2	02 03.613	0.07	2	70.857	-19 10 10.67	0.07	2	70.857				9446
9759	-81	399	5.62	A0	10 02 08.458	0.15	6	69.003	-81 58 22.47	0.13	6	69.003	3980	13849	2403	33980
9759 SP					02 08.560	0.11	6	70.251	-81 58 22.30	0.10	6	70.251	3980	13849	2403	53980
9760	-27	7172	8.4	K2	02 09.871	0.14	4	70.080	-27 29 08.33	0.08	4	70.080				9447
9761	-11	2787	8.0	K0	02 10.986	0.04	2	70.685	-11 29 10.89	0.10	2	70.685		13851		9448
9762	- 8	2841	8.7	K5	02 14.282	0.01	2	70.868	- 8 38 04.17	0.43	2	70.868				9449

9692 A 7606, 8.5m-11.2m, 0°6, 207°.
 9703 9.5m-9.5m, 0°2, 111°.

9725 SDS, 9.7m, 2°3, 345°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
9763	-39	6100	6.44	K0	10 02 16.887	0.15	6	69.983	-39 43 57.82	0.19	6	69.983	2809	13853	2404	32809
9764	-23	8980	8.7	K0	02 21.570	0.13	4	69.697	-23 46 40.19	0.06	4	69.697				9450
9765	-86	189	7.26	K5	02 22.173	0.07	4	69.191	-86 40 12.09	0.16	4	69.191		13854	2405	19310
9765	SP				02 22.038	0.07	4	70.360	-86 40 12.10	0.13	4	70.360		13854	2405	19310
9766	-47	5500	6.76	G5	02 23.667	0.09	6	69.450	-48 12 10.45	0.12	6	69.450	2810	13855		32810
9767	+ 0	2610	8.5	F0	10 02 25.871	0.01	2	70.788	- 0 13 55.70	0.30	2	70.788				9451
9768	-47	5502	9.0	K5	02 27.343	0.05	4	70.125	-47 40 08.67	0.08	4	70.125				1198
9769	-44	6154	8.2	K2	02 31.763	0.10	4	70.082	-44 26 48.57	0.09	4	70.082				1199
9770	- 2	3052	7.54	K5	02 40.530	0.30	2	71.719	- 3 16 26.20	0.05	2	71.719		13860	2407	9452
9771	-12	3073	4.72	B8	02 41.240	0.03	45	71.848	-12 49 16.98	0.05	44	71.842	1261	13861	2408	31261
9772	-34	6393	7.6	K5	10 02 44.635	0.20	4	70.065	-34 54 27.30	0.14	4	70.065				9453
9773	-16	2957	8.4	G5	02 47.193	0.17	2	70.759	-16 42 36.60	-	1	70.241				9454
9774	-38	6153	8.9	K2	02 48.964	0.12	4	70.139	-38 52 29.08	0.09	4	70.139				9455
9775	- 8	2843	7.9	A2	03 00.325	0.14	2	70.670	- 9 18 15.71	0.06	2	70.670				9456
9776	-46	5785	8.0	K0	03 00.366	0.12	4	70.135	-46 41 36.49	0.20	4	70.135				1200
9777	-51	4451	7.18	K0	10 03 01.086	0.08	4	69.163	-51 46 54.66	0.03	4	69.163		13869		1201
9778	-32	7037	8.6	K5	03 03.962	0.06	4	70.225	-32 31 21.65	0.08	4	70.225				9457
9779	-33	6644	9.3	F8	03 04.504	0.11	4	70.212	-33 38 32.55	0.21	4	70.212				9458
9780	-12	3075	8.4	K0	03 10.641	0.07	2	70.594	-13 18 45.59	0.11	2	70.594				9459
9781	-55	2876	8.54	K0	03 18.206	0.10	4	69.259	-55 31 25.62	0.18	4	69.259		13878		9460
9782	-11	2796	8.7	K	10 03 23.590	0.18	2	69.826	-11 46 24.45	0.05	2	69.826				9461
9783	- 4	2798	9.0	A0	03 24.320	0.05	2	71.722	- 5 10 45.31	0.27	2	71.722				9462
9784	-19	2908	8.4	K0	03 32.417	0.12	4	70.194	-20 18 04.80	0.13	4	70.194				9463
9785	+ 3	2314	8.2	G5	03 32.824	0.35	2	70.847	+ 2 40 24.52	0.16	2	70.847				9464
9786	-61	1458	7.7	K5	03 34.097	0.12	4	69.589	-61 26 16.84	0.16	4	69.589				9465
9787	-26	7663	7.3	K2	10 03 35.291	0.07	4	70.174	-27 01 52.95	0.18	4	70.174				9466
9788	-35	6135	8.6	K5	03 36.629	0.06	4	70.196	-35 33 11.14	0.15	4	70.196				9467
9789	- 0	2294	8.9	K2	03 43.121	0.13	2	69.718	- 1 14 50.71	0.34	2	69.718				9468
9790	-40	5775	8.5	K0	03 53.982	0.09	4	70.681	-40 37 14.49	0.16	4	70.681				1202
9791	-66	1171	8.3	K2	03 55.453	0.13	4	69.633	-66 28 26.49	0.07	4	69.633				19311
9792	-35	6144	7.8	K0	10 04 02.476	0.17	4	70.948	-36 08 30.41	0.09	4	70.948				9469
9793	-25	7756	7.8	K0	04 07.794	0.10	4	69.566	-26 21 13.09	0.15	4	69.566				9470
9794	+ 6	2259	6.29	G5	04 10.533	0.07	6	69.031	+ 5 51 21.41	0.08	6	69.031	2811	13888	2411	32811
9795	-28	7901	8.4	K2	04 10.602	0.12	3	71.402	-28 24 16.38	0.12	4	70.866				9471
9796	-29	8085	8.1	F8	04 11.709	0.13	4	70.129	-29 52 33.73	0.12	4	70.129				9472
9797	-50	4806	8.5	K5	10 04 21.680	0.03	4	69.686	-50 38 17.93	0.06	4	69.686				1203
9798	-30	8185	9.0	K5	04 21.974	0.17	4	69.696	-30 54 44.54	0.14	4	69.696				9473
9799*	-43	5919	9.0	K2	04 23.999	0.06	4	70.715	-43 55 14.66	0.06	4	70.715				1204
9800	+ 1	2401	8.6	K0	04 31.997	0.13	2	69.818	+ 1 10 54.60	0.04	2	69.818				9474
9801	+ 4	2292	8.8	K0	04 34.366	0.07	2	70.833	+ 3 56 03.79	0.07	2	70.833				9475
9802	- 4	2802	8.2	K0	10 04 35.217	0.07	2	70.719	- 5 19 17.70	0.38	2	70.719				9476
9803	+17	2171	3.58	A0p	04 36.526	0.02	131	71.179	+17 00 26.13	0.03	123	71.191	379	13899	2412	80379
9804	-22	2832	8.5	F0	04 36.656	0.06	4	68.695	-23 17 56.02	0.16	4	68.695				9477
9805	-71	908	9.2	G5	04 42.522	0.09	4	69.687	-72 15 42.88	0.18	4	69.687				19312
9806	-16	2974	5.87	K2	04 45.469	0.06	6	69.315	-16 53 47.89	0.11	6	69.315	2813	13902		32813
9807	-57	2657	8.3	K5	10 04 45.585	0.08	4	69.226	-57 44 22.37	0.18	4	69.226				9478
9808	-53	3304	8.0	K0	04 46.381	0.22	4	69.734	-53 27 06.94	0.12	4	69.734				9479
9809	-81	409	7.31	K0	04 51.308	0.09	4	69.530	-82 15 53.69	0.10	4	69.530		13904		19313
9809	SP				04 51.240	0.15	4	69.825	-82 15 53.59	0.29	4	69.825		13904		19313
9810	+ 0	2614	8.9	K0	04 55.232	0.13	2	70.851	- 0 00 44.04	0.16	2	70.851				9480
9811	-49	4956	8.1	K5	10 04 55.649	0.16	4	70.187	-49 43 19.45	0.14	4	70.187				1205
9812	+ 1	2403	6.99	M0	04 59.029	0.07	2	70.788	+ 1 09 47.59	0.31	2	70.788		13908	2413	9481
9813	- 5	2991	7.6	G0	05 04.287	0.05	2	71.683	- 6 11 42.60	0.18	2	71.683				9482
9814	-24	8775	8.4	K5	05 05.674	0.13	4	68.624	-24 41 25.23	0.12	4	68.624				9483
9815	- 6	3078	6.86	M0	05 16.198	0.04	2	70.699	- 7 23 08.55	0.07	2	70.699		13912		9484
9816	+ 0	2615	4.50	A0	10 05 22.708	0.14	6	69.081	- 0 07 35.61	0.07	6	69.081	2814	13916		32814
9817	-42	5943	7.8	K5	05 23.961	0.05	4	70.130	-42 42 53.66	0.08	4	70.130				1206
9818	-45	5774	8.6	K0	05 28.977	0.12	4	70.160	-45 24 47.48	0.06	4	70.160				1207
9819	-47	5560	7.95	K0	05 31.580	0.05	4	70.164	-48 16 47.12	0.11	4	70.164		13921		1208
9820	-71	909	8.2	K5	05 33.315	0.11	4	69.668	-71 31 45.35	0.22	4	69.668				19314
9821	-79	477	9.1	K0	10 05 37.774	0.15	4	70.129	-79 25 06.41	0.11	4	70.129				19315
9821	SP				05 37.843	0.35	4	70.065	-79 25 06.32	0.42	4	70.065				19315
9822	-52	3245	7.7	M0	05 41.416	0.08	4	70.181	-53 00 54.48	0.09	4	70.181				9485
9823	+12	2149	1.34	B8	05 42.280	0.04	34	71.086	+12 12 44.58	0.06	33	71.081	380	13926	2414	30380
9824	-57	2686	8.2	G5	05 49.120	0.05	4	69.225	-58 12 58.02	0.06	4	69.225				9486
9825	-74	663	9.1	K0	10 06 02.570	0.14	4	70.081	-74 22 43.16	0.08	4	70.081				19316
9826	-62	1439	8.7	K0	06 07.686	0.23	4	69.739	-62 22 49.07	0.14	3	69.227				9487
9827	-14	3036	6.16	A0	06 10.508	0.03	2	69.862	-15 21 59.58	0.01	2	69.862		13933		9488
9828	-36	6162	8.7	K0	06 10.683	0.08	4	70.170	-37 19 21.96	0.18	4	70.170				9489
9829	-10	3000	6.46	A0	06 17.879	0.02	2	71.482	-10 38 21.41	0.21	2	71.482		13935		9490
9830	-41	5634	9.0	K0	10 06 24.670	0.07	4	70.215	-41 39 40.35	0.06	4	70.215				1209
9831	-68	1031	8.9	K7	06 26.134	0.12	4	69.689	-69 00 08.96	0.13	4	69.689				19317
9832	-32	7089	8.6	K0	06 38.831	0.08	4	69.714	-32 37 34.70	0.07	4	69.714				9491
9833	-67	1207	8.3	K5	06 46.911	0.16	4	69.715	-68 04 41.66	0.06	4	69.715				19318
9834	+ 3	2321	7.6	G0	06 48.698	0.11	2	70.674	+ 2 37 00.98	0.34	2	70.674		13947		9492

9799 9.4m-10.8m, 0°8, 308°.

CATALOG OF 23,001 STARS FOR 1950.0

371

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
9835	- 0	2301	8.0	K5	10 06 49.867	0.01	2	70.700	- 1 25 20.55	0.05	2	70.700				9493
9836	- 8	2859	8.7	K0	06 53.846	0.12	2	70.553	- 8 28 30.81	0.13	2	70.553				9494
9837	-55	2953	8.20	K0	06 55.858	0.23	4	70.150	-56 10 29.25	0.12	4	70.150		13950		9495
9838	- 9	3008	8.8	K0	06 56.724	0.17	2	70.758	- 9 40 57.83	0.54	2	70.758				9496
9839	- 3	2860	8.2	K5	06 57.083	0.12	2	70.729	- 3 42 06.65	0.09	2	70.729				9497
9840	-51	4507	5.10	B5	10 07 02.277	0.10	6	70.583	-51 33 55.45	0.15	6	70.583		13953	2418	21029
9841	+ 3	2323	8.2	K0	07 06.925	0.12	3	72.110	+ 3 24 28.77	0.18	2	72.543		13956		9498
9842	-39	6170	8.0	K0	07 11.442	0.20	4	69.741	-39 35 22.03	0.15	4	69.741				9499
9843	-21	2998	8.5	K2	07 17.983	0.09	4	68.677	-22 00 25.48	0.05	4	68.677				9500
9844	-60	1695	7.5	K5	07 18.289	0.16	5	69.639	-60 56 47.92	0.05	4	69.715				9501
9845	-35	6194	6.28	G0	10 07 21.605	0.21	6	69.023	-35 36 38.95	0.08	6	69.023	2816	13961	2420	32816
9846	-35	6193	8.9	K2	07 24.244	0.06	5	69.698	-35 24 53.90	0.10	4	69.769				9502
9847	-18	2853	8.1	K2	07 35.204	0.10	3	71.225	-18 37 03.95	0.25	2	71.207				9503
9848	+ 5	2294	8.8	A3	07 39.089	0.01	2	70.679	+ 4 52 20.60	0.09	2	70.679				9504
9849	-28	7947	8.5	K2	07 40.242	0.13	4	68.710	-29 02 21.57	0.11	4	68.710				9505
9850	-38	6238	9.1	K2	10 07 41.040	0.04	4	70.064	-38 35 19.70	0.08	4	70.064				9506
9851	-22	2849	8.8	K2	07 46.961	0.16	4	68.704	-23 24 15.34	0.09	4	68.704				9507
9852	- 4	2809	8.1	F5	07 53.317	0.07	2	70.774	- 5 13 25.57	0.02	2	70.774			2422	9508
9853	-30	8230	7.6	K2	07 57.422	0.14	4	68.725	-30 39 06.62	0.10	4	68.725				9509
9854	-56	2918	7.8	G5	08 02.833	0.08	4	69.601	-56 25 26.95	0.12	4	69.601				9510
9855	-69	1155	8.5	G0	10 08 02.843	0.12	4	69.083	-70 07 11.03	0.18	4	69.083				19319
9856	-14	3044	8.8	A2	08 06.222	0.04	2	69.821	-15 22 41.67	0.04	2	69.821				9511
9857	-11	2820	3.83	K0	08 08.648	0.02	120	71.549	-12 06 24.46	0.03	116	71.544	381	13982	2424	30381
9858	-10	3010	8.8	G0	08 12.829	0.01	2	71.674	-11 13 24.17	0.04	2	71.674				9512
9859	+ 1	2410	8.8	K5	08 17.720	0.04	2	70.849	+ 1 15 07.56	0.04	2	70.849				9513
9860	-12	3104	8.2	F0	10 08 20.441	0.22	2	70.853	-12 36 55.50	0.00	2	70.853				9514
9861	-77	589	8.8	K0	08 24.817	0.15	4	68.654	-78 18 53.05	0.05	4	68.654				19320
9861	SP				08 24.791	0.26	4	70.362	-78 18 52.82	0.37	4	70.362				19320
9862	-76	616	9.0	K2	08 26.457	0.08	4	69.608	-76 25 27.81	0.17	4	69.608				19321
9862	SP				08 26.361	0.18	4	70.491	-76 25 27.68	0.31	4	70.491				19321
9863	- 1	2356	7.9	G5	10 08 28.819	0.37	2	71.658	- 2 10 05.57	0.70	2	71.658				9515
9864	-24	8833	7.9	M0	08 32.819	0.13	4	69.156	-25 11 27.07	0.05	4	69.156				9516
9865	-16	2987	8.0	K0	08 32.848	0.11	2	71.688	-16 41 02.44	0.30	2	71.688				9517
9866	-34	6507	8.5	K0	08 39.407	0.07	4	69.579	-34 33 40.92	0.07	4	69.579				9518
9867	- 6	3092	7.7	K2	08 41.078	0.18	2	71.689	- 6 47 50.78	0.05	2	71.689				9519
9868	- 6	3096	6.06	A0	10 08 47.880	0.09	6	69.114	- 7 04 10.40	0.18	6	69.114	2818	13995		32818
9869	-19	2939	8.4	K0	08 48.545	0.02	4	69.633	-19 58 52.55	0.10	4	69.633				9520
9870	-56	2936	7.9	K0	08 48.927	0.15	4	69.148	-57 01 53.25	0.12	4	69.148				9521
9871	-16	2989	7.7	G5	08 53.544	0.07	2	70.672	-17 23 18.77	0.10	2	70.672			2427	9522
9872	-62	1459	8.4	K0	08 57.019	0.09	4	68.736	-63 05 38.56	0.06	4	68.736				9523
9873	-43	6007	8.6	K5	10 08 57.413	0.06	4	69.633	-43 34 41.98	0.14	4	69.633				1210
9874	-45	5820	9.2	K7	09 00.336	0.03	4	69.687	-46 20 27.60	0.22	4	69.687				1211
9875	-31	8028	9.0	K5	09 01.332	0.10	3	69.796	-31 47 56.99	0.12	4	69.662				9524
9876	-37	6353	8.9	G5	09 02.544	0.18	4	70.136	-37 37 49.25	0.16	4	70.136				9525
9877	-13	3055	8.6	K2	09 08.668	0.02	2	70.647	-14 01 37.40	0.16	2	70.647				9526
9878	-50	4882	9.0	K0	10 09 19.764	0.07	4	69.606	-51 02 15.51	0.06	4	69.606				1212
9879	-36	6197	7.8	K2	09 20.267	0.16	4	69.676	-36 33 04.81	0.09	4	69.676				9527
9880	-26	7734	8.4	K0	09 21.988	0.07	4	70.084	-26 27 48.03	0.12	4	70.084				9528
9881	-55	3004	8.2	K0	09 22.526	0.12	4	69.586	-55 51 30.38	0.19	4	69.586				9529
9882	- 5	3011	7.8	F2	09 30.853	0.05	2	70.729	- 5 57 20.69	0.06	2	70.729				9530
9883	-20	3124	8.4	K0	10 09 35.143	0.08	4	69.246	-21 02 07.80	0.12	4	69.246				9531
9884	-61	1496	7.57	K0	09 37.857	0.05	4	69.599	-61 31 16.10	0.13	4	69.599		14006		9532
9885	-32	7135	9.0	K5	09 47.339	0.17	4	69.727	-33 12 34.60	0.12	4	69.727				9533
9886	- 9	3017	8.3	M1	09 50.970	0.33	2	70.679	-10 04 26.08	0.40	2	70.679				9534
9887	-39	6199	8.8	K2	09 54.022	0.05	4	69.685	-40 17 37.23	0.11	4	69.685				1213
9888	-45	5836	8.64	G5	10 09 55.637	0.17	4	69.712	-45 23 58.51	0.16	4	69.712		14016		1214
9889	-23	9095	8.8	K2	09 56.327	0.08	4	70.363	-23 51 21.74	0.16	4	70.363				9535
9890	-64	1204	7.9	K2	09 57.695	0.07	4	69.653	-64 45 24.15	0.13	4	69.653				19322
9891	-14	3054	6.99	A0	09 58.373	0.01	2	70.576	-14 49 13.02	0.17	2	70.576		14017		9536
9892	-57	2781	6.12	B2p	10 01.622	0.10	6	68.685	-57 48 47.21	0.08	6	68.685	2819	14018		32819
9893	-15	3003	8.3	K5	10 10 04.812	0.01	2	70.601	-15 38 31.08	0.16	2	70.601				9537
9894	+ 5	2301	5.91	K0	10 12.183	0.22	2	69.821	+ 4 51 44.86	0.13	2	69.821		14022		9538
9895	-18	2870	6.44	F5	10 15.170	0.19	2	70.776	-18 54 16.32	0.03	2	70.776		14025		9539
9896	- 8	2873	8.7	F8	10 15.841	0.26	2	70.674	- 9 07 23.45	0.25	2	70.674				9540
9897	-74	678	9.1	F8	10 18.336	0.17	4	69.645	-75 16 44.93	0.17	4	69.645				19323
9897	SP				10 18.289	0.37	4	69.616	-75 16 45.35	0.46	4	69.616				19323
9898	-58	1988	7.83	G0	10 28.336	0.11	4	69.651	-59 21 19.37	0.11	4	69.651		14026		9541
9899	- 4	2816	8.7	K5	10 43.131	0.05	2	69.696	- 4 58 11.09	0.07	2	69.696				9542
9900	-65	1265	7.54	K5	10 46.146	0.07	5	70.506	-65 56 01.60	0.17	5	70.506		14034		19324
9901	- 7	2985	7.71	G5	10 47.066	0.18	2	70.650	- 8 11 50.02	0.03	2	70.650		14035		9543
9902	- 0	2308	8.6	F8	10 51.428	0.22	2	71.536	- 0 41 33.59	0.06	2	71.536				9544
9903	+ 1	2414	8.6	F0	10 56.079	0.26	3	71.315	+ 0 41 11.28	0.11	2	71.342				9545
9904	-53	3444	7.8	K0	11 01.118	0.09	4	69.742	-54 19 32.73	0.07	4	69.742				9546
9905	-66	1201	7.4	K5	11 02.269	0.14	4	69.713	-66 26 36.75	0.15	4	69.713				19325
9906	+ 3	2336	8.6	K2	11 03.796	0.22	2	71.668	+ 2 55 02.27	0.22	2	71.668				9547

9882 8.5m-8.7m, 0°4, 211°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
9907	-52°	3355	8.3	K5	10	11	06.939	0.05	5	70.967	-53° 12'	03.15	0.21	5	70.967				9548
9908	-29	8184	8.3	K0	11	11	11.496	0.13	4	68.667	-30 10	55.59	0.12	4	68.667				9549
9909*	-63	1334	8.3	K0	11	11	16.886	0.21	5	70.012	-63 58	06.22	0.05	3	69.817				9550
9910	-49	5060	8.0	K2	11	11	20.053	0.11	5	70.667	-50 21	45.44	0.24	5	70.667				1215
9911	-3	2873	7.8	K0	11	11	22.922	0.03	2	71.531	-3 52	33.56	0.22	2	71.531				9551
9912	-80	432	8.9	G5	10	11	23.331	0.18	4	70.027	-80 24	28.08	0.11	4	70.027				19326
9912	SP				11	11	23.300	0.33	4	70.328	-80 24	27.66	0.61	4	70.328				19326
9913	-27	7291	8.3	K0	11	11	24.731	0.07	4	69.096	-27 42	47.65	0.12	4	69.096				9552
9914	-22	2869	7.6	K0	11	11	31.233	0.06	3	69.115	-22 49	55.47	0.11	4	69.152				9553
9915	-41	5698	8.5	K2	11	11	34.666	0.07	5	69.594	-41 58	36.74	0.11	4	69.639				1216
9916	-42	6049	8.5	K0	10	11	37.082	0.06	4	70.132	-42 47	57.01	0.14	4	70.132				1217
9917	-14	3062	8.0	A2	11	11	37.792	0.02	2	70.612	-14 28	38.25	0.14	2	70.612			2433	9554
9918	-61	1517	6.48	B3	11	11	43.188	0.05	6	69.550	-61 24	37.66	0.11	6	69.550	2822	14055		32822
9919	-38	6305	8.23	K5	12	12	07.911	0.18	4	70.179	-38 37	10.62	0.11	4	70.179	14067			9555
9920	-2	3097	7.8	A5	12	12	10.294	0.02	2	70.837	-2 37	37.33	0.27	2	70.837				9556
9921	-37	6394	9.3	M0	10	12	10.753	0.13	4	70.207	-37 54	18.08	0.03	4	70.207				9557
9922	-21	3013	8.5	A2	12	12	15.803	0.11	4	69.143	-21 28	45.46	0.09	4	69.143				9558
9923	-68	1062	7.8	K2	12	12	18.108	0.08	4	70.112	-68 51	01.83	0.25	4	70.112				19327
9924	+1	2418	8.1	K2	12	12	26.510	0.11	2	69.818	+1 04	05.91	0.04	2	69.818				9559
9925	-69	1178	3.56	B8	12	12	32.800	0.03	124	71.085	-69 47	21.22	0.03	123	71.083	385	14074	2434	30385
9926	-28	8019	8.6	A3	10	12	33.720	0.07	4	69.196	-28 34	16.63	0.09	4	69.196				9560
9927	-5	3024	8.8	K0	12	12	37.052	0.04	2	69.721	-6 10	27.77	0.05	2	69.721				9561
9928	-41	5713	4.09	A2	12	12	37.704	0.03	59	70.818	-41 52	24.08	0.04	58	70.793	382	14076	2435	30382
9929	-72	916	8.8	A0	12	12	39.824	0.18	4	70.269	-73 05	09.42	0.30	4	70.269				19328
9930	-54	3339	7.7	G5	12	12	43.282	0.07	4	70.627	-55 02	40.10	0.16	4	70.627				9562
9931	-24	8903	8.5	K5	10	12	46.932	0.08	4	69.182	-24 44	19.13	0.14	4	69.182				9563
9932	-63	1344	8.3	A2	12	12	50.137	0.14	5	70.039	-64 17	30.19	0.13	4	70.215				19329
9933	-57	2850	8.2	K0	12	12	56.134	0.09	4	70.253	-58 18	14.81	0.06	4	70.253				9564
9934	-49	5083	8.5	G5	12	12	59.634	0.11	4	70.236	-49 39	21.72	0.21	4	70.236				1218
9935	-10	3027	8.1	F0	13	13	10.450	0.30	2	70.871	-10 56	19.21	0.13	2	70.871				9565
9936	-34	6574	7.7	K2	10	13	21.621	0.08	5	70.923	-35 13	49.22	0.04	4	70.839				9566
9937	+30	1981	5.35	A0	13	13	24.156	0.16	7	71.180	+29 33	36.65	0.17	6	71.168	2823	14086		32823
9938	-54	3356	6.48	B3	13	13	25.169	0.09	6	70.676	-54 43	29.41	0.17	6	70.676	14087			21030
9939	-30	8290	8.0	K5	13	13	26.998	0.21	4	70.431	-31 13	54.29	0.05	4	70.431				9567
9940	-47	5701	8.5	K0	13	13	31.550	0.11	4	70.608	-47 44	36.29	0.14	4	70.608				1219
9941	-0	2316	8.5	K5	10	13	34.967	0.07	2	70.726	-1 20	53.31	0.08	2	70.726			2436	9568
9942	-31	8102	7.8	M0	13	13	35.568	0.19	4	70.284	-31 55	36.34	0.12	4	70.284				9569
9943	+4	2306	8.3	K0	13	13	36.377	0.07	2	71.695	+3 47	55.37	0.08	2	71.695				9570
9944	-47	5704	9.0	G5	13	13	40.714	0.09	4	70.676	-48 18	55.23	0.18	4	70.676				1220
9945	-17	3103	8.7	K0	13	13	43.980	0.05	2	71.718	-18 27	54.74	0.13	2	71.718				9571
9946	-43	6097	8.0	M0	10	13	50.984	0.13	5	71.155	-44 19	15.93	0.10	5	71.155				1221
9947	-38	6333	8.9	G5	13	13	51.022	0.14	4	70.619	-39 15	21.83	0.13	4	70.619				9572
9948	-15	3018	8.2	K0	13	13	51.138	0.22	2	71.725	-15 53	32.81	0.05	2	71.725				9573
9949	-52	3420	7.61	G5	13	13	51.550	0.04	4	70.196	-52 23	39.18	0.12	4	70.196		14103		9574
9950	-4	2830	8.7	K0	13	13	52.412	0.18	2	72.012	-5 00	31.61	0.27	2	72.012				9575
9951	+24	2209	3.65	F0	10	13	54.780	0.03	49	71.258	+23 40	01.61	0.05	48	71.213	384	14107	2440	80384
9952	+14	2228	5.74	M0	13	13	59.763	0.07	5	71.321	+13 58	41.67	0.08	5	71.321	2824	14110	2441	32824
9953*	-28	8041	7.74	F5	14	14	01.382	0.13	4	70.084	-28 43	42.93	0.11	4	70.084		14111		9576
9954	-1	2369	8.2	K0	14	14	02.319	0.29	2	70.685	-2 21	07.35	0.01	2	70.685				9577
9955	-18	2885	6.57	A2	14	14	09.381	0.11	6	70.681	-19 03	30.07	0.06	6	70.681	2825	14116	2443	32825
9956	-36	6254	7.3	G5	10	14	10.286	0.11	4	70.187	-36 39	31.82	0.15	4	70.187				9578
9957	+2	2310	7.8	K2	14	14	16.927	0.17	2	71.555	+2 02	51.76	0.03	2	71.555				9579
9958	-10	3031	8.6	A5	14	14	19.442	0.08	3	72.221	-10 31	22.18	0.15	2	72.275				9580
9959	-12	3129	7.17	G5	14	14	19.895	0.12	2	72.253	-12 50	58.24	0.32	2	72.253			2444	9581
9960	+3	2344	8.6	G0	14	14	20.285	0.02	2	72.288	+2 40	20.16	0.04	2	72.288				9582
9961	-17	3106	8.7	F5	10	14	20.688	0.12	2	72.205	-18 03	41.12	0.42	2	72.205				9583
9962	-0	2317	8.8	K0	14	14	22.811	0.00	2	72.302	-1 10	01.31	0.30	2	72.302				9584
9963	-8	2888	9.0	K2	14	14	31.186	0.11	3	72.545	-8 47	31.20	0.18	3	72.545				9585
9964	-35	6283	9.9	K0	14	14	44.286	0.09	4	71.277	-36 10	21.41	0.22	4	71.277				9586
9965	-11	2841	8.5	K5	14	14	44.576	0.01	2	72.312	-11 52	33.51	0.09	2	72.312				9587
9966	-26	7806	8.6	K5	10	14	56.790	0.06	4	69.695	-26 36	46.37	0.04	4	69.695				9588
9967	-24	8934	8.6	F8	14	14	58.025	0.09	5	70.485	-24 49	47.19	0.12	5	70.485				9589
9968	-2	3110	8.2	A2	14	14	59.760	0.33	2	71.809	-3 17	00.56	0.23	2	71.809				9590
9969	-61	1563	8.48	F5	15	15	02.098	0.18	4	70.151	-62 03	20.94	0.10	4	70.151		14128		9591
9970	-7	3001	5.40	F0	15	15	08.456	0.07	6	69.871	-7 49	06.86	0.07	6	69.871	1263	14129	2446	31263
9971	-33	6833	8.0	K0	10	15	09.639	0.08	4	70.681	-34 09	54.35	0.06	4	70.681				9592
9972	+5	2314	8.4	F0	15	15	12.581	0.16	3	72.941	+4 52	07.79	0.20	3	72.941				9593
9973	-23	9159	7.0	K0	15	15	12.623	0.11	5	71.178	-23 37	33.15	0.16	5	71.178				9594
9974	-16	3013	8.8	K2	15	15	12.773	0.15	4	72.498	-17 17	10.90	0.11	4	72.498				9595
9975	-11	2843	7.8	A2	15	15	16.275	0.04	2	72.313	-11 49	42.32	0.11	2	72.313				9596
9976	-33	6834	9.0	K0	10	15	19.909	0.06	4	70.958	-33 24	02.39	0.05	4	70.958				9597
9977	-37	6431	8.5	K5	15	15	21.737	0.12	5	70.445	-37 36	30.10	0.24	4	70.702				9598
9978	-44	6363	9.0	G0	15	15	21.769	0.09	4	70.932	-44 49	59.18	0.12	4	70.932				1222
9979	-12	3132	8.5	K0	15	15	23.995	0.08	3	72.947	-13 16	35.21	0.33						

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*		
9981	-3	2887	8.5	A5	10	15	26.057	0.16	3	72.638	-3	34	24.25	0.19	3	72.638				9600	
9982	-20	3145	7.38	K5	15	30.705	0.05	4	70.268	-20	46	31.93	0.11	4	70.268		14134			9601	
9983	-47	5745	9.0	M1	15	31.800	0.06	4	70.703	-47	41	48.30	0.23	4	70.703					1223	
9984	-26	7813	8.3	K0	15	34.536	0.20	4	70.676	-27	18	09.83	0.17	4	70.676					9602	
9985	-77	602	8.9	G5	15	36.505	0.19	4	70.363	-77	37	00.57	0.11	4	70.363					19331	
9985	SP				10	15	36.426	0.39	4	70.670	-77	37	00.42	0.25	4	70.670					19331
9986	-71	954	9.0	K5	15	36.867	0.12	4	70.304	-72	00	48.50	0.08	4	70.304					19330	
9987	-0	2319	8.1	F2	15	42.793	0.28	2	72.320	-0	59	37.15	0.28	2	72.320		14141			9603	
9988	-42	6111	8.6	K5	15	47.664	0.09	5	70.990	-42	28	21.10	0.16	3	70.203					1224	
9989	-50	5015	8.5	K2	15	48.195	0.10	4	70.714	-50	40	08.91	0.13	4	70.714					1225	
9990	-28	8070	5.62	B9	10	15	49.879	0.06	14	70.274	-28	44	28.83	0.07	15	70.206	1265	14144	2450		31265
9991	-39	6278	8.0	K2	15	56.657	0.09	4	70.281	-40	19	13.44	0.04	4	70.281					1226	
9992	-48	5504	8.4	K0	16	03.470	0.13	5	71.127	-48	30	56.78	0.06	5	71.127					1227	
9993	-25	7916	7.7	K0	16	05.638	0.17	4	70.265	-26	14	56.72	0.11	4	70.265					9604	
9994	-6	3125	9.0	G5	16	06.661	0.01	2	72.298	-7	15	03.61	0.20	2	72.298					9605	
9995	-7	3005	8.6	K0	10	16	12.915	0.00	2	70.745	-8	24	32.14	0.12	2	70.745					9606
9996	-51	4651	7.5	K2	16	24.693	0.06	5	70.951	-52	04	49.83	0.17	4	70.661					1228	
9997	-52	3476	8.0	K0	16	26.034	0.15	4	70.239	-52	28	55.40	0.12	4	70.239					9607	
9998	-37	6448	8.9	K5	16	30.425	0.06	4	70.179	-38	09	27.62	0.26	4	70.179					9608	
9999	-10	3037	7.66	G0	16	32.089	0.22	3	71.908	-10	55	58.74	0.11	3	71.908		14159			9609	
10000	-19	2974	8.3	K0	10	16	36.557	0.16	4	70.312	-20	03	36.00	0.16	4	70.312					9610
10001	-55	3212	7.8	F0	16	38.645	0.13	5	70.350	-56	18	30.97	0.07	4	70.603					9611	
10002	-49	5140	8.0	K5	16	39.127	0.12	4	70.181	-49	39	41.54	0.16	4	70.181					1229	
10003	-14	3086	8.6	A5	16	40.977	0.09	2	72.034	-15	04	29.24	0.19	2	72.034					9612	
10004	-8	2895	8.1	A2	16	41.430	0.01	2	71.715	-9	05	03.37	0.06	2	71.715		14162			9613	
10005	-35	6312	8.2	K5	10	16	46.488	0.09	4	70.657	-36	09	14.94	0.13	4	70.657					9614
10006	-73	714	8.6	K2	16	54.636	0.03	4	70.287	-73	38	50.08	0.07	4	70.287					19332	
10007	-38	6383	8.9	K2	17	02.451	0.15	4	71.176	-38	58	41.06	0.13	4	71.176					9615	
10008	-24	8969	8.6	K2	17	04.078	0.17	4	70.144	-25	02	09.96	0.19	4	70.144					9616	
10009	-4	2841	7.56	F2	17	04.572	0.18	2	70.845	-4	58	32.68	0.27	2	70.845		14174	2452		9617	
10010	+0	2641	8.0	F0	10	17	05.423	0.02	2	71.343	+0	02	30.19	0.05	2	71.343					9618
10011	-54	3457	8.4	G5	17	06.802	0.07	5	70.327	-55	05	06.77	0.27	4	70.089					9619	
10012	-21	3035	7.3	K0	17	26.850	0.17	4	70.204	-22	16	18.33	0.18	4	70.204					9620	
10013	-32	7243	9.1	K0	17	29.590	0.23	5	70.970	-32	28	55.39	0.33	5	70.970					9621	
10014	-33	6872	9.1	K5	17	31.220	0.12	5	70.110	-34	10	02.83	0.04	4	70.284					9622	
10015	-54	3474	4.58	K0	10	17	43.714	0.14	6	69.568	-54	46	39.66	0.06	6	69.568	2830	14185			32830
10016	-66	1224	7.9	K5	17	49.274	0.16	4	69.668	-67	05	40.61	0.02	4	69.668					19333	
10017	-30	8363	7.9	K0	17	49.636	0.16	4	69.270	-31	21	49.91	0.08	4	69.270					9623	
10018	+4	2313	8.5	K2	17	55.319	0.15	2	71.560	+3	52	28.35	0.09	2	71.560					9624	
10019	-15	3029	8.7	F5	18	01.668	0.13	3	71.866	-16	27	54.84	0.01	2	72.169					9625	
10020	-45	5969	7.0	K5	10	18	02.860	0.07	4	70.167	-45	51	42.51	0.13	4	70.167					1230
10021	-52	3505	8.8	K0	18	07.136	0.11	5	70.440	-53	22	07.07	0.11	5	70.440					9626	
10022	-5	3043	7.7	A5	18	08.182	0.19	2	70.793	-5	56	26.98	0.08	2	70.793					9627	
10023	-29	8276	8.6	K2	18	13.601	0.11	3	68.574	-30	15	33.69	0.25	4	68.746					9628	
10024	-47	5790	5.62	K0	18	14.076	0.15	6	69.352	-47	26	49.86	0.12	6	69.352	2831	14197	2455		32831	
10025	-35	6335	8.5	K5	10	18	16.710	0.14	5	70.832	-35	37	22.42	0.19	5	70.832					9629
10026	-18	2902	7.3	F8	18	22.372	0.05	2	71.605	-18	47	56.46	0.09	2	71.605					9630	
10027	-59	2052	7.94	K0	18	22.799	0.11	5	69.909	-59	37	59.50	0.21	4	70.053		14200			9631	
10028	+3	2352	6.53	B3	18	27.078	0.02	144	71.196	+2	32	30.75	0.02	140	71.160	1266	14204	2457		81266	
10029	-41	5785	9.0	K0	18	29.220	0.08	4	70.217	-41	48	10.85	0.18	4	70.217					1231	
10030	-32	7260	8.6	K5	10	18	34.007	0.06	4	70.127	-33	22	42.83	0.12	4	70.127					9632
10031	-7	3014	7.9	A5	18	40.026	0.12	2	70.771	-8	27	25.77	0.32	2	70.771					9633	
10032	-57	3019	8.0	K5	18	46.190	0.06	4	69.189	-57	30	50.24	0.17	4	69.189					9634	
10033	-13	3097	6.59	A2	18	47.743	0.17	2	70.706	-13	32	03.04	0.05	2	70.706		14214			9635	
10034	-75	649	9.7	K2	19	05.483	0.11	5	70.327	-75	27	30.85	0.09	5	70.327					19334	
10034	SP				10	19	05.297	0.41	4	70.407	-75	27	30.29	0.23	4	70.407					19334
10035	-22	2904	6.48	A3	19	07.310	0.13	6	69.734	-23	27	30.60	0.11	6	69.734	2832	14223	2458		32832	
10036	-29	8292	7.68	K0	19	14.794	0.10	4	69.111	-29	41	08.15	0.14	4	69.111		14229	2459		9636	
10037	-14	3097	8.6	K5	19	16.775	0.09	2	70.825	-14	56	51.64	0.15	2	70.825					9637	
10038	-27	7398	8.1	K2	19	16.990	0.12	4	68.741	-28	01	32.05	0.11	4	68.741					9638	
10039	-57	3035	7.30	K0	10	19	20.293	0.13	4	68.660	-58	13	53.16	0.14	4	68.660		14231			9639
10040	-0	2328	7.53	G5	19	29.998	0.01	2	70.745	-0	29	55.35	-	1	70.214		14238			9640	
10041	+1	2425	8.9	K5	19	31.322	0.31	2	70.741	+1	24	49.65	0.40	2	70.741					9641	
10042	-45	6000	8.4	K0	19	46.378	0.10	4	70.183	-45	37	08.72	0.04	4	70.183					1232	
10043	-46	6044	9.1	G5	19	52.884	0.08	4	70.688	-47	06	22.60	0.17	4	70.688					1233	
10044	+16	2116	7.37	G5	10	20	02.879	0.06	4	70.206	+15	35	53.34	0.17	4	70.206	1268	14245	2462		26693
10045	-41	5809	4.99	K5	20	10.608	0.05	48	71.133	-41	23	51.03	0.04	44	71.145		14248			31268	
10046	+1	2428	8.3	F2	20	10.692	0.19	2	72.160	+1	24	17.19	0.03	2	72.160					9642	
10047	-61	1604	8.4	G5	4	69.637	0.17	4	69.637	-61	47	00.54	0.24	4	69.637					9643	
10048	-6	3134	8.5	K0	20	16.360	0.01	2	71.703	-6	30	01.74	0.34	2	71.703					9644	
10049	-53	3688	7.7	K2	10	20	17.666	0.15	4	69.653	-54	20	02.16	0.16	4	69.653					9645
10050	-68	1124	8.0	K2	20	20.781	0.17	4	70.090	-69	04	49.23	0.12	4	70.090					19335	

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
10054	-10	3051	8.6	K2	10 20 31.472	0.10	2	69.773	-11 01 39.77	0.16	2	69.773	2833	14263		9648
10055	+ 6	2301	6.50	F2	20 38.515	0.05	6	70.068	+ 5 56 52.92	0.05	6	70.068				32833
10056	- 7	3021	8.1	K0	20 46.760	0.10	2	70.519	- 7 31 12.44	0.00	2	70.519				9649
10057	-81	432	7.30	A5	20 50.226	0.21	7	69.028	-81 23 46.07	0.06	7	69.028	3981	14264		33981
10057	SP				20 50.054	0.23	6	70.376	-81 23 45.77	0.10	6	70.376	3981	14264		53981
10058	-31	8213	8.2	K2	10 20 51.170	0.24	4	70.235	-32 18 13.99	0.10	4	70.235				9650
10059	- 3	2911	6.10	B9	20 54.729	0.03	69	71.764	- 3 49 14.46	0.03	68	71.772	388	14268	2465	30388
10060	- 2	3132	6.67	K5	21 00.622	0.26	3	70.895	- 3 23 22.10	0.13	3	70.895		14272		9651
10061	-40	5988	7.34	K2	21 07.033	0.02	4	70.655	-40 26 31.26	0.10	4	70.655		14274		1235
10062	-74	696	8.4	K0	21 07.149	0.07	4	69.687	-74 46 37.98	0.07	4	69.687				19336
10063	-11	2871	8.1	G5	10 21 07.298	0.14	2	69.818	-12 14 00.48	0.23	2	69.818				9652
10064	+ 3	2357	8.3	K2	21 11.820	0.33	2	70.845	+ 2 54 18.69	0.49	2	70.845				9653
10065	-60	1873	8.60	M0	21 12.915	0.16	4	69.628	-60 24 59.23	0.14	4	69.628		14278		9654
10066	- 1	2382	7.6	G5	21 16.229	0.01	2	70.699	- 2 01 21.01	0.06	2	70.699				9655
10067	-37	6509	5.40	A3	21 17.395	0.06	28	71.247	-37 45 21.26	0.06	28	71.247	1269	14281	2466	31269
10068	-41	5831	8.5	K2	10 21 21.479	0.04	4	70.629	-41 49 32.14	0.23	4	70.629				1236
10069	-60	1874	7.5	K0	21 21.651	0.12	4	69.617	-61 00 44.41	0.06	4	69.617				9656
10070	-48	5598	8.0	K2	21 25.586	0.15	4	70.641	-49 21 42.28	0.20	4	70.641				1237
10071	-66	1243	5.28	B8	21 28.913	0.06	6	69.647	-66 38 53.16	0.06	6	69.647	2834	14283	2467	32834
10072	-12	3154	8.6	K2	21 31.427	0.06	2	70.632	-13 04 02.71	0.05	2	70.632				9657
10073	- 4	2861	7.3	K0	10 21 34.908	0.16	2	70.834	- 4 40 25.05	0.06	2	70.834				9658
10074	-61	1622	8.31	K0	21 40.318	0.07	5	70.214	-61 27 47.92	0.24	5	70.214		14289		9659
10075	-30	8417	8.7	K2	21 44.313	0.09	4	69.557	-31 16 32.21	0.11	4	69.557				9660
10076	-16	3045	8.5	K0	21 47.529	0.06	2	70.882	-17 10 45.42	0.03	2	70.882				9661
10077	- 1	2383	8.8	K2	22 02.872	0.03	2	71.728	- 2 21 58.94	0.26	2	71.728				9662
10078	-35	6392	8.3	F0	10 22 03.618	0.13	5	70.628	-35 23 36.24	0.08	5	70.628				9663
10079	-48	5608	8.6	K0	22 04.672	0.14	4	70.141	-48 57 18.88	0.19	4	70.141				1238
10080	-67	1313	8.2	K0	22 04.796	0.05	4	69.775	-68 01 27.24	0.19	4	69.775				19337
10081	-50	5114	9.0	K0	22 05.967	0.14	5	70.220	-50 45 47.56	0.16	4	70.442				1239
10082	+ 0	2650	8.0	F8	22 17.596	0.04	2	70.784	- 0 08 51.10	0.14	2	70.784				9664
10083	-20	3169	8.6	A0	10 22 19.964	0.09	4	70.391	-21 16 27.73	0.07	4	70.391				9665
10084	-70	1064	8.2	K5	22 22.276	0.11	4	69.639	-70 28 31.59	0.17	4	69.639				19338
10085	-32	7321	7.5	K5	22 23.333	0.08	4	69.678	-33 14 04.41	0.03	4	69.678				9666
10086	- 2	3138	8.8	K2	22 23.735	0.09	2	70.795	- 3 15 52.83	0.54	2	70.795				9667
10087	- 9	3067	8.3	K5	22 27.245	0.05	2	71.674	- 9 32 18.05	0.09	2	71.674				9668
10088	-24	9040	7.9	K5	10 22 28.841	0.06	4	70.138	-24 43 04.19	0.09	4	70.138				9669
10089	-64	1268	8.5	K2	22 31.135	0.05	4	70.226	-64 33 39.87	0.07	4	70.226				19339
10090	+ 9	2351	5.92	M0	22 37.159	0.07	6	70.316	+ 9 02 21.76	0.16	6	70.316	2835	14301	2470	32835
10091	-59	2101	6.99	M3	22 39.064	0.15	4	70.217	-59 56 14.24	0.22	3	69.863		14303		9670
10092	-26	7901	7.7	K2	22 39.908	0.08	4	70.238	-27 22 02.20	0.06	4	70.238				9671
10093	-39	6364	8.6	K0	10 22 46.640	0.05	5	70.123	-39 59 36.54	0.07	4	70.146				9672
10094	-22	2914	8.3	K5	22 54.885	0.09	4	70.622	-23 16 59.97	0.06	4	70.622				9673
10095	-14	3116	9.0	G5	22 55.380	0.04	2	70.735	-14 46 21.39	0.25	2	70.735				9674
10096	+ 5	2333	8.4	F5	22 57.811	0.04	2	70.642	+ 4 49 34.48	0.04	2	70.642				9675
10097	-38	6456	8.6	K0	23 10.376	0.06	5	69.632	-38 25 10.41	0.13	4	69.686				9676
10098	-21	3061	8.3	K0	10 23 12.124	0.18	3	69.988	-21 41 55.13	0.07	4	69.806				9677
10099	- 6	3146	5.85	K5	23 14.087	0.08	6	70.530	- 6 48 22.83	0.08	6	70.530	2836	14321		32836
10100	-56	3290	7.8	K0	23 18.214	0.07	4	69.255	-56 48 33.96	0.08	4	69.255				9678
10101	-30	8440	9.2	K0	23 18.832	0.11	4	70.767	-30 25 11.34	0.14	4	70.767				9679
10102	-70	1076	7.4	K2	23 22.225	0.17	4	69.743	-71 21 26.83	0.16	4	69.743				19340
10103	-73	733	4.08	F5	10 23 24.345	0.03	99	71.132	-73 46 37.44	0.03	97	71.120	391	14323	2474	30391
10103	SP				23 24.304	0.07	47	71.320	-73 46 37.49	0.13	46	71.332	391	14323	2474	50391
10104	-19	3006	7.6	K0	23 27.289	0.14	5	70.848	-20 04 14.65	0.11	5	70.848				9680
10105	+ 4	2328	9.1	G5	23 32.096	0.10	3	69.883	+ 4 09 19.77	0.29	3	69.883				26699
10106	-16	3052	4.06	K5	23 40.026	0.03	49	71.127	-16 34 51.35	0.03	47	71.100	389	14326	2477	30389
10107	-14	3119	9.2	F8	10 23 42.934	0.14	2	69.747	-14 42 48.61	0.22	2	69.747				9681
10108	-11	2880	8.7	K0	23 55.390	0.18	2	69.792	-11 49 19.45	0.24	2	69.792				9682
10109	-27	7444	8.7	F5	23 57.174	0.04	4	70.975	-27 58 52.77	0.13	4	70.975				9683
10110	-29	8340	8.3	K0	23 58.343	0.16	5	70.721	-29 36 29.59	0.11	5	70.721				9684
10111	-19	3012	8.7	K0	24 13.763	0.14	4	70.804	-20 11 55.21	0.19	4	70.804				9685
10112	-15	3060	8.8	G5	10 24 15.143	0.17	2	70.810	-16 06 52.80	0.33	2	70.810				9686
10113	-47	5888	9.0	G5	24 16.572	0.11	4	70.127	-47 49 52.93	0.21	4	70.127				1240
10114	-42	6225	8.28	K2	24 16.660	0.14	4	69.689	-43 08 55.31	0.09	4	69.689		14339		1241
10115	+20	2487	6.29	K0	24 17.400	0.07	6	70.029	+19 37 10.84	0.11	6	70.029	2837	14340		32837
10116	-34	6713	8.4	M1	24 19.376	0.05	4	70.160	-34 26 44.71	0.10	4	70.160				9687
10117	+ 0	2655	7.71	K2	10 24 20.077	0.23	2	70.818	+ 0 06 25.04	-	1	70.359			2479	9688
10118	-66	1260	8.9	F5	24 25.252	0.10	4	69.657	-66 22 55.55	0.19	4	69.657				19341
10119	-62	1573	7.9	K0	24 25.822	0.07	5	70.574	-62 36 16.27	0.23	5	70.574				9689
10120	- 4	2873	8.5	F5	24 27.887	0.25	2	69.825	- 5 25 11.92	0.14	2	69.825				9690
10121	-37	6542	8.2	F8	24 29.568	0.11	4	70.103	-37 51 25.78	0.12	4	70.103				9691
10122	-16	3057	8.7	K2	10 24 30.032	0.09	2	71.352	-17 21 20.87	0.12	3	71.364				9692
10123	-78	546	9.1	K5	24 38.480	0.12	4	69.639	-78 52 26.20	0.16	4	69.639				19342
10123	SP				24 38.493	0.11	4	69.966	-78 52 25.90	0.35	4	69.966				19342
10124	+ 2	2321	8.9	K5	24 41.652	0.27	2	71.691	+ 1 46 12.07	0.02	2	71.691				9693
10125	+ 4	2331	8.2	K5	24 48.580	0.08	2	71.531	+ 4 06 14.24	0.22	2	71.531				9694

10105 A 7773BC, 9.1m-11.7m, 0°9, 19°.

CATALOG OF 23,001 STARS FOR 1950.0

375

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
10126	-30	8465	4.42	K5	10 24 51.497	0.03	84	71.004	-30 48 45.15	0.03	83	71.000	392	14352	2482	30392
10127	-7	3039	8.0	K5	24 52.802	0.16	2	70.628	-7 32 49.35	0.16	2	70.628				9695
10128	-36	6399	7.8	M1	24 56.434	0.12	4	70.170	-36 57 28.27	0.09	4	70.170				9696
10129	-23	9296	7.7	K0	24 58.090	0.09	4	70.232	-23 31 39.86	0.04	4	70.232				9697
10130	-17	3153	7.08	A0	25 00.359	0.12	2	71.719	-18 01 53.09	0.11	2	71.719		14360		9698
10131	-0	2344	8.5	K0	10 25 02.139	0.15	3	71.842	-0 42 27.26	0.14	2	71.718		14362		9699
10132	-20	3178	8.4	G5	25 02.575	0.14	4	70.148	-21 11 11.16	0.06	4	70.148				9700
10133	-46	6127	9.5	K2	25 04.656	0.10	4	70.191	-46 27 10.34	0.19	4	70.191				1242
10134	-35	6438	9.1	G8	25 07.704	0.10	4	70.646	-35 59 26.64	0.13	4	70.646				9701
10135	-15	3062	8.0	G5	25 23.922	0.19	2	70.714	-15 39 45.25	0.18	2	70.714				9702
10136	-75	660	8.6	G5	10 25 25.388	0.13	5	69.700	-76 11 51.32	0.25	5	69.700				19343
10136	SP				25 25.327	0.05	4	70.184	-76 11 50.92	0.12	4	70.184				19343
10137	-43	6279	8.11	K2	25 27.428	0.20	5	70.085	-44 15 29.17	0.20	4	70.252	14372			1243
10138	-50	5162	8.5	K5	25 39.050	0.13	4	69.194	-51 20 06.15	0.05	4	69.194				1244
10139	-44	6512	7.5	K0	25 39.397	0.06	4	70.629	-44 50 34.76	0.11	4	70.629				1245
10140	-53	3834	8.0	K0	10 25 40.571	0.19	6	70.621	-53 38 53.58	0.10	6	70.621				9703
10141	-62	1588	8.49	A3	25 49.462	0.12	4	69.648	-63 16 03.79	0.17	4	69.648	14382			9704
10142*	-25	8055	8.5	G0	25 49.543	0.07	3	69.324	-25 33 05.98	0.06	4	69.308				9705
10143	+1	2446	8.8	G5	25 57.340	0.16	2	70.606	+0 46 51.05	0.36	2	70.606				9706
10144	-9	3082	7.5	K0	25 59.535	0.03	2	70.722	-9 37 31.37	0.37	2	70.722				9707
10145	-87	166	8.7	K2	10 26 00.021	0.14	4	68.619	-87 28 31.14	0.13	4	68.619				19344
10145	SP				25 59.942	0.19	4	69.566	-87 28 30.68	0.14	4	69.566				19344
10146	-58	2227	4.08	F0	26 02.273	0.04	42	70.719	-58 29 00.98	0.06	41	70.753	393	14388	2491	30393
10147	-5	3073	7.7	A0	26 03.090	0.07	3	71.211	-6 02 50.78	0.03	2	71.186				9708
10148	-4	2883	9.0	F5	26 11.985	0.16	3	71.906	-5 09 43.14	0.20	2	71.803				9709
10149	-18	2943	6.90	K0	10 26 12.345	0.00	2	71.730	-19 16 07.25	0.18	2	71.730		14392		9710
10150	-8	2932	8.6	K0	26 12.860	0.14	3	71.910	-8 40 28.57	0.09	3	71.910				9711
10151	-33	6995	8.4	K5	26 18.591	0.10	4	70.107	-33 24 58.92	0.19	4	70.107				9712
10152	-13	3129	8.3	K2	26 19.316	0.04	2	69.780	-14 12 34.29	0.01	2	69.780				9713
10153	+3	2371	7.4	F2	26 23.604	0.33	2	70.810	+2 54 11.28	0.26	2	70.810				9714
10154	-13	3130	8.7	K5	10 26 36.727	0.21	2	70.862	-13 32 37.34	0.04	2	70.862				9715
10155	-21	3073	8.6	K5	26 39.056	0.09	4	69.166	-21 59 48.53	0.11	4	69.166				9716
10156	-11	2886	8.3	K0	26 39.635	0.15	2	70.844	-12 10 43.40	0.11	2	70.844				9717
10157	-58	2236	7.5	K0	26 41.141	0.12	4	69.614	-58 35 45.13	0.14	4	69.614				9718
10158	-65	1360	9.1	A2	26 46.281	0.18	4	69.695	-65 26 17.25	0.05	4	69.695				19345
10159	-27	7476	8.0	K5	10 26 46.736	0.16	4	69.181	-28 13 22.90	0.05	4	69.181				9719
10160	-47	5919	8.0	K0	26 48.659	0.02	4	70.186	-48 11 02.82	0.07	4	70.186				1246
10161	-26	7950	8.4	K0	26 52.374	0.05	4	70.008	-26 36 38.37	0.15	4	70.008				9720
10162	-2	3155	5.24	B9	26 56.234	0.04	55	71.540	-2 28 57.64	0.04	55	71.540	1270	14403	2493	31270
10163	-44	6534	9.3	G5	26 58.586	0.20	4	70.279	-45 06 37.22	0.22	4	70.279				1247
10164	-29	8380	8.6	F5	10 27 01.414	0.08	4	70.071	-30 17 00.47	0.10	4	70.071				9721
10165	-34	6755	8.5	K2	27 03.574	0.12	4	70.137	-34 45 58.31	0.13	4	70.137				9722
10166	+29	2057	6.92	K0	27 05.702	0.03	86	71.052	+28 50 15.46	0.04	84	71.035	1271	14409	2494	81271
10167	+2	2323	6.85	F5	27 08.038	0.05	2	71.605	+1 44 54.46	0.31	2	71.605		14412		9723
10168	-32	7391	7.3	K2	27 16.817	0.08	4	70.530	-32 41 06.44	0.18	4	70.530				9724
10169	-3	2934	8.2	G0	10 27 17.359	0.08	2	70.825	-3 39 30.59	-	1	70.373		14422		9725
10170	-24	9098	8.8	A0	27 18.175	0.12	4	69.643	-24 49 11.75	0.10	4	69.643				9726
10171	-36	6430	9.1	K5	27 20.307	0.06	4	70.170	-37 14 36.82	0.16	4	70.170				9727
10172	+3	2373	8.7	A5	27 22.574	0.07	3	71.843	+3 19 26.06	0.09	2	71.719				9728
10173	-38	6511	8.7	K2	27 25.708	0.11	4	70.674	-38 46 56.22	0.24	4	70.674				9729
10174	-18	2949	8.6	K2	10 27 29.052	0.04	2	71.708	-18 40 48.37	0.31	2	71.708				9730
10175	-52	3611	8.3	K2	27 29.151	0.09	4	70.177	-52 30 34.87	0.09	4	70.177				9731
10176	-1	2396	8.6	K2	27 29.211	0.17	2	71.684	-1 56 48.55	0.09	2	71.684				9732
10177	-42	6274	8.5	K0	27 33.325	0.11	5	69.982	-42 52 45.24	0.10	4	70.124				1248
10178	-41	5903	8.9	M0	27 40.933	0.06	4	70.597	-42 05 25.00	0.16	4	70.597				1249
10179	+4	2344	8.1	K0	10 27 41.363	0.19	2	70.763	+3 48 34.01	0.07	2	70.763				9733
10180	+0	2663	4.95	B5	27 44.024	0.06	6	69.281	-0 22 48.52	0.10	6	69.281	2841	14431		32841
10181	-15	3069	8.5	K2	27 46.339	0.06	2	71.651	-16 25 03.80	0.12	2	71.651				9734
10182	-31	8298	8.8	K2	27 48.577	0.17	4	69.712	-31 57 03.19	0.10	4	69.712				9735
10183	-68	1174	8.7	K5	28 01.093	0.10	4	69.689	-69 21 10.92	0.09	4	69.689				19346
10184	-10	3073	7.5	K5	10 28 04.002	0.21	3	71.265	-10 33 04.47	0.14	2	71.275				9736
10185	-6	3172	8.6	F0	28 27.787	0.22	2	70.643	-6 44 27.58	0.17	2	70.643				9737
10186p	-6	3173	6.40	K5	28 28.455	0.05	3	71.264	-7 22 49.96	0.15	2	71.266		14442		9738
10187	-56	3450	7.9	K0	28 33.532	0.11	4	69.684	-57 17 02.80	0.10	4	69.684				9739
10188*	-35	6481	8.6	K2	28 36.439	0.12	4	70.045	-36 00 14.93	0.07	4	70.045				9740
10189	-54	3753	8.3	K2	10 28 38.794	0.13	5	69.675	-55 10 38.16	0.08	4	69.760				9741
10190	-80	462	7.53	K0	28 40.633	0.09	4	69.200	-80 47 58.51	0.16	4	69.200		14446		19347
10190	SP				28 40.563	0.18	4	69.919	-80 47 58.34	0.14	4	69.919		14446		19347
10191	-53	3899	7.91	K5	28 46.280	0.08	4	69.706	-54 13 27.58	0.21	4	69.706		14447		9742
10192	-70	1108	7.08	M3	28 48.022	0.03	4	69.730	-70 37 52.77	0.09	4	69.730		14448		19348
10193	-3	2939	8.6	K2	10 28 53.899	0.14	2	69.778	-3 29 10.32	0.24	2	69.778				9743
10194	-2	3165	8.5	K0	29 01.289	0.16	2	70.718	-2 36 33.84	0.16	2	70.718				9744
10195	-71	1034	4.94	A2	29 04.510	0.07	6	69.002	-71 44 07.68	0.10	6	69.002	2842	14457		32842
10195	SP				29 04.496	0.08	23	71.420	-71 44 07.44	0.23	22	71.463	2842	14457		52842
10196	-39	6449	8.1	K0	29 13.601	0.09	4	69.693	-40 00 39.77	0.12	4	69.693				9745

10142 A 7787, 8.8m-9.0m, 0^h1.
 10186 A 7808AB, 9.9m, 2^h7, 16^s.

10188 9.4m-9.4m, 0^h2, 15^s.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
10197	- 8	2945	7.8	K5	10 29 14.735	0.01	2	70.691	- 8 41 39.80	0.21	2	70.691				9746
10198	-70	1114	8.9	K0	29 25.865	0.12	4	69.593	-71 00 45.15	0.17	4	69.593				19349
10199	-40	6082	8.5	K2	29 25.963	0.15	4	70.064	-40 33 12.51	0.21	4	70.064				1250
10200	-50	5214	8.8	K0	29 27.215	0.20	4	69.251	-51 20 36.87	0.24	4	69.251				1251
10201	+14	2255	5.74	M0	29 31.660	0.05	31	71.254	+14 23 40.65	0.07	31	71.254	1272	14468	2497	31272
10202	+25	2260	7.16	F0	10 29 32.098	0.12	6	70.383	+24 41 59.38	0.12	6	70.383	2843	14469		32843
10203	-11	2898	8.7	K0	29 32.941	0.03	2	69.822	-11 56 30.67	0.04	2	69.822				9747
10204	+ 5	2347	7.21	K0	29 42.657	0.16	2	69.822	+ 4 54 09.66	0.06	2	69.822		14476		9748
10205	-28	8246	8.7	A0	29 50.246	0.09	4	68.799	-29 01 11.53	0.20	4	68.799				9749
10206	-83	359	8.56	F2	29 55.798	0.04	4	69.642	-83 52 54.96	0.20	4	69.642		14482		19350
10206 SP					10 29 56.056	0.22	4	69.717	-83 52 54.58	0.28	4	69.717		14482		19350
10207	- 0	2356	8.88	F8	30 10.302	0.16	2	70.827	- 0 36 30.70	0.31	2	70.827		14486		9750
10208	+10	2166	3.85	B0p	30 10.752	0.05	25	71.275	+ 9 33 51.87	0.08	25	71.275	396	14487	2499	30396
10209	-28	8251	7.9	F8	30 11.665	0.13	4	70.341	-28 47 13.08	0.08	4	70.341				9751
10210	-61	1704	3.58	B5p	30 14.414	0.03	60	71.329	-61 25 39.53	0.04	58	71.316	397	14489	2500	30397
10211	-49	5339	9.3	K2	10 30 19.837	0.10	5	70.991	-50 22 33.87	0.07	5	70.991				1252
10212	-55	3543	8.4	K5	30 20.111	0.12	4	69.719	-55 51 13.59	0.18	4	69.719				9752
10213	-31	8330	7.8	K0	30 25.952	0.10	4	69.662	-32 18 05.10	0.16	4	69.662				9753
10214	-58	2280	8.4	K0	30 31.784	0.11	5	70.558	-59 20 46.53	0.19	5	70.558				9754
10215	-42	6312	7.85	K0	30 36.751	0.12	4	70.139	-43 22 10.55	0.06	4	70.139		14499		1253
10216	-14	3138	8.6	K0	10 30 39.103	0.12	2	71.752	-14 29 41.06	0.09	2	71.752				9755
10217	-52	3661	7.7	K0	30 42.065	0.10	5	70.846	-52 52 55.54	0.21	5	70.846				9756
10218	- 4	2898	7.15	K0	30 43.076	0.34	2	71.814	- 5 06 11.94	0.47	2	71.814		14502		9757
10219	-49	5348	8.5	G5	30 44.869	0.11	4	70.185	-49 52 40.85	0.07	4	70.185				1254
10220	-46	6206	8.9	K0	30 49.023	0.12	4	70.700	-47 10 39.97	0.17	4	70.700				1255
10221	-24	9144	8.4	K5	10 30 49.480	0.08	3	69.920	-25 14 27.69	0.13	4	69.755				9758
10222	-46	6205	5.14	K0	30 49.924	0.04	32	70.964	-46 44 43.10	0.06	29	70.869	1273	14505	2504	31273
10223	-58	2285	6.19	A2	30 55.078	0.12	6	70.662	-58 24 31.07	0.11	6	70.662		14508		21031
10224	- 0	2357	9.0	K2	30 59.621	0.10	2	71.343	- 0 54 38.21	0.13	2	71.343				9759
10225	-21	3095	8.5	K5	31 01.855	0.02	4	70.525	-22 19 35.39	0.30	4	70.525				9760
10226	-19	3044	8.5	F0	10 31 06.114	0.10	4	70.681	-19 55 22.56	0.11	4	70.681				9761
10227	- 5	3089	9.0	K0	31 13.484	0.03	2	70.812	- 6 07 15.96	0.32	2	70.812				9762
10228	+ 3	2388	7.7	K5	31 21.115	0.05	2	69.699	+ 2 52 52.95	0.22	2	69.699				9763
10229	+ 2	2330	8.8	K0	31 24.800	0.27	2	71.296	+ 1 35 09.90	0.01	2	71.296				9764
10230	-26	8002	7.66	K2	31 30.425	0.04	4	70.142	-27 05 27.57	0.09	4	70.142		14521		9765
10231	-22	2946	5.32	K2	10 31 37.997	0.03	39	71.136	-23 29 12.62	0.04	37	71.108	399	14524	2506	30399
10232	-34	6816	9.0	K0	31 39.319	0.23	4	70.722	-34 43 12.78	0.08	4	70.722				9766
10233	+ 4	2351	8.5	K2	31 42.873	0.29	2	72.271	+ 4 22 12.09	0.15	2	72.271				9767
10234	- 8	2954	8.7	K5	31 45.810	0.16	2	70.868	- 9 01 17.95	0.34	2	70.868				9768
10235	- 2	3173	8.8	K2	31 47.431	0.12	2	70.859	- 3 26 13.32	0.10	2	70.859				9769
10236	- 9	3101	7.3	F5	10 31 48.753	0.18	2	71.538	- 9 38 26.18	0.16	2	71.538				9770
10237	-51	4850	9.5	K2	32 04.364	0.13	5	70.368	-51 55 23.76	0.05	4	70.627				1256
10238	-25	8116	8.3	A0	32 05.913	0.08	4	70.929	-26 04 17.50	0.04	4	70.929				9771
10239	-75	671	8.15	K0	32 09.545	0.10	4	70.158	-75 46 49.39	0.18	4	70.158		14532		19351
10239 SP					32 09.523	0.24	4	70.218	-75 46 49.05	0.50	4	70.218		14532		19351
10240	+ 7	2330	5.17	K0	10 32 11.403	0.07	6	70.089	+ 7 12 43.38	0.07	6	70.089	2846	14533	2509	32846
10241*	-45	6200	8.5	K0	32 11.858	0.06	4	70.672	-46 13 34.68	0.19	4	70.672				1257
10242*	-36	6489	8.39	G0	32 16.250	0.07	4	70.610	-37 05 44.18	0.17	4	70.610		14537		9772
10243	-37	6639	7.6	K0	32 17.978	0.14	5	70.925	-37 52 12.13	0.10	4	70.841				9773
10244	- 3	2950	6.62	F8	32 18.082	0.13	2	70.693	- 3 38 22.16	0.04	2	70.693		14538		9774
10245	-56	3518	8.0	K0	10 32 20.035	0.16	5	69.948	-56 43 15.40	0.11	4	70.159				9775
10246	-33	7081	8.35	K0	32 22.930	0.09	4	70.703	-33 30 22.02	0.05	4	70.703		14539		9776
10247	-17	3182	9.0	K0	32 23.333	0.10	2	71.797	-18 03 53.00	0.59	2	71.797				9777
10248	-48	5745	8.5	K2	32 24.040	0.08	5	70.505	-49 00 24.56	0.30	4	70.778				1258
10249	-64	1342	8.9	G0	32 25.319	0.06	4	69.757	-65 08 23.85	0.19	4	69.757				19352
10250	-41	5969	8.9	K2	10 32 28.593	0.09	4	70.186	-41 50 09.12	0.14	4	70.186				1259
10251	+ 2	2334	6.73	K2	32 31.395	0.25	2	72.272	+ 2 27 48.01	0.25	2	72.272		14543	2511	9778
10252	-67	1397	8.4	K5	32 39.263	0.13	4	70.157	-68 12 02.06	0.03	4	70.157				19353
10253	-80	467	7.50	K0	32 42.265	0.09	4	70.168	-81 21 27.03	0.26	4	70.168		14548		19354
10253 SP					32 42.018	0.27	4	70.030	-81 21 26.82	0.46	4	70.030		14548		19354
10254	-29	8454	8.2	K0	10 32 51.049	0.07	4	69.654	-30 04 42.23	0.12	4	69.654				9779
10255	- 4	2906	7.5	A2	32 53.955	0.02	2	71.579	- 5 06 10.18	0.26	2	71.579				9780
10256	-71	1059	9.3	K0	33 04.111	0.15	4	69.101	-72 12 52.72	0.21	4	69.101				19355
10257	-12	3208	7.8	K0	33 10.662	0.03	2	70.736	-12 44 27.41	0.15	2	70.736		14558		9781
10258	-17	3187	6.43	A0	33 13.225	0.31	2	71.781	-18 18 35.47	0.19	2	71.781		14561		9782
10259	-13	3165	7.8	F5	10 33 15.885	0.11	3	72.223	-13 41 49.82	0.17	2	72.265				9783
10260	-35	6557	9.0	G5	33 16.503	0.04	4	70.214	-36 07 38.94	0.09	4	70.214				9784
10261	-16	3090	8.2	M0	33 18.699	0.11	2	72.282	-17 06 50.04	0.02	2	72.282				9785
10262	- 7	3066	8.2	K2	33 21.225	0.04	2	72.215	- 8 16 29.53	0.11	2	72.215				9786
10263	-38	6589	9.0	F0	33 24.953	0.18	4	70.287	-39 19 55.61	0.19	4	70.287				9787
10264	-34	6833	8.9	K	10 33 25.423	0.24	4	70.732	-35 18 44.98	0.12	4	70.732				9788
10265	+ 3	2394	7.5	K0	33 26.656	0.12	2	70.825	+ 3 00 23.78	0.04	2	70.825				9789
10266	-20	3221	8.9	A2	33 31.102	0.10	4	70.101	-21 11 22.06	0.10	4	70.101				9790
10267	-11	2916	7.9	K0	33 33.239	0.22	2	71.173	-11 39 06.69	0.06	2	71.173		14569		9791
10268	-45	6219	8.1	K0	33 36.004	0.01	4	70.209	-46 15 24.06	0.11	4	70.209				1260

10241 8.5m-9.4m, 0°6, 81°.

10242 9.0m-9.0m, 0°2, 70°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
10269	-50	5264	8.07	K5	10 33 47.526	0.09	6	70.849	-51 10 08.93	0.16	6	70.849		14574		1261
10270	-1	2411	8.6	F8	33 49.871	0.16	2	70.741	-1 30 52.18	0.10	2	70.741				9792
10271	-15	3087	6.23	K5	33 50.018	0.03	2	71.601	-16 05 05.29	0.26	2	71.601		14578		9793
10272	-53	3981	8.7	K0	33 57.261	0.03	4	69.789	-53 41 24.64	0.07	4	69.789				9794
10273	-4	2910	9.0	K0	33 58.124	0.36	2	71.805	-4 34 09.93	0.33	2	71.805				9795
10274	-23	9412	8.5	K2	10 34 00.906	0.04	3	70.453	-24 18 22.69	0.09	4	70.155				9796
10275	-11	2918	5.85	F8	34 03.280	0.02	100	71.333	-11 57 54.65	0.03	95	71.330	1274	14582	2514	81274
10276	-30	8566	8.9	K2	34 03.490	0.11	4	70.193	-30 33 25.69	0.05	4	70.193				9797
10277	-31	8374	8.6	K5	34 05.972	0.07	5	70.136	-31 34 24.48	0.23	5	70.136				9798
10278	-66	1338	9.2	K0	34 06.049	0.03	4	70.945	-66 47 50.22	0.11	4	70.945				19356
10279	-85	245	6.74	A0	10 34 08.228	0.02	167	70.921	-85 49 56.02	0.03	163	70.917	1663	14583	2515	61663
10279 SP					34 08.299	0.03	135	70.911	-85 49 56.07	0.05	131	70.914	1663	14583	2515	71663
10280*	-28	8306	6.75	A0	34 14.870	0.06	4	70.228	-28 30 44.08	0.12	4	70.228				9799
10281	-6	3194	8.3	F8	34 15.412	0.15	2	71.699	-6 37 57.97	0.41	2	71.699				9800
10282	-57	3535	7.83	K5	34 16.488	0.19	4	70.159	-57 36 12.17	0.05	4	70.159		14589		9801
10283	-82	420	8.5	K0	10 34 16.834	0.09	4	70.090	-83 06 12.83	0.06	4	70.090				19357
10283 SP					34 16.769	0.40	4	70.461	-83 06 12.31	0.24	4	70.461				19357
10284	-27	7567	6.83	K2	34 21.447	0.05	4	70.936	-27 23 48.35	0.14	4	70.936		14592		9802
10285	-73	755	8.6	K5	34 23.813	0.08	6	70.356	-74 20 26.97	0.20	5	70.561				19358
10286	-21	3109	7.1	K5	34 27.349	0.21	4	69.245	-22 24 19.40	0.07	4	69.245				9803
10287	-75	678	6.24	K0	10 34 29.719	0.10	6	69.570	-76 02 58.52	0.09	6	69.570	2847	14595	2518	32847
10287 SP					34 29.653	0.06	6	70.135	-76 02 58.70	0.35	6	70.135	2847	14595	2518	52847
10288	-79	533	9.1	M0	34 33.624	0.08	5	70.768	-79 39 26.48	0.13	5	70.768				19359
10288 SP					34 33.539	0.25	3	70.397	-79 39 26.33	0.17	3	70.397				19359
10289	-26	8033	5.08	K5	34 52.570	0.10	6	69.115	-27 09 10.38	0.13	6	69.115	2848	14603		32848
10290	-77	622	4.10	M0	10 34 53.320	0.04	71	71.106	-78 20 53.88	0.05	70	71.104	401	14604	2519	30401
10290 SP					34 53.317	0.07	32	71.070	-78 20 53.68	0.13	32	71.070	401	14604	2519	50401
10291p	-10	3099	8.2	K0	34 55.999	0.05	2	71.659	-10 47 02.66	0.00	2	71.659				9804
10292	-42	6368	9.5	K0	34 58.083	0.10	4	69.661	-42 25 32.91	0.15	4	69.661				1262
10293	-44	6671	8.0	K0	35 02.842	0.12	4	69.601	-45 13 16.14	0.20	4	69.601				1263
10294	-18	2982	8.8	A2	10 35 08.321	0.18	2	70.669	-19 05 46.35	0.17	2	70.669				9805
10295	-8	2967	8.6	A2	35 08.523	0.17	2	70.702	-9 27 29.68	0.04	2	70.702				9806
10296	-48	5785	8.03	K5	35 13.231	0.15	4	70.129	-48 59 14.54	0.18	4	70.129		14616		1264
10297	-45	6242	9.0	K2	35 26.689	0.12	4	70.109	-45 39 33.81	0.15	4	70.109				1265
10298	+2	2343	8.0	F5	35 43.016	0.07	2	70.636	+1 30 16.02	0.17	2	70.636		14623		9807
10299	-43	6442	8.0	K0	10 35 57.202	0.10	4	69.709	-43 38 49.95	0.08	4	69.709				1266
10300	-13	3180	8.7	K0	35 59.172	0.18	2	70.756	-13 50 47.08	0.34	2	70.756				9808
10301	-1	2417	8.3	A3	35 59.226	0.05	2	70.728	-1 47 25.11	0.26	2	70.728				9809
10302	-40	6176	8.5	K2	35 59.753	0.08	4	69.702	-40 48 26.50	0.19	4	69.702				1267
10303	-27	7584	8.7	F5	36 06.903	0.13	4	69.136	-27 51 04.53	0.10	4	69.136				9810
10304	-17	3200	8.2	F5	10 36 07.632	0.25	2	70.722	-17 37 34.52	0.12	2	70.722				9811
10305	-16	3100	5.11	K0	36 08.509	0.03	6	68.937	-16 36 58.72	0.10	6	68.937	2850	14631	2522	32850
10306	+16	2144	6.62	F2	36 13.802	0.07	6	70.051	+16 23 17.40	0.05	6	70.051	2851	14633		32851
10307	-59	2356	7.8	M0	36 15.078	0.06	4	69.073	-60 17 19.17	0.07	4	69.073				9812
10308	-84	287	7.5	K0	36 17.355	0.04	4	69.665	-85 01 19.63	0.11	4	69.665				19360
10308 SP					36 17.548	0.19	4	69.686	-85 01 19.04	0.25	4	69.686				19360
10309	-7	3081	8.3	K5	36 20.166	0.06	2	70.722	-7 57 50.26	0.27	2	70.722				9813
10310	-14	3156	8.4	K0	36 23.097	0.04	2	70.695	-15 28 09.64	0.17	2	70.695				9814
10311	-47	6061	8.8	K0	36 25.217	0.13	4	69.752	-47 48 05.71	0.14	4	69.752				1268
10312	-9	3113	8.7	K0	36 25.276	0.28	2	71.543	-9 53 23.76	0.26	2	71.543				9815
10313	-18	2989	8.7	K2	10 36 25.824	0.10	2	70.715	-19 20 23.63	0.02	2	70.715				9816
10314	-33	7131	8.6	K0	36 26.664	0.13	4	70.130	-34 13 33.39	0.10	4	70.130				9817
10315	-31	8409	8.7	G5	36 28.596	0.12	4	69.183	-31 28 06.76	0.12	4	69.183				9818
10316	-67	1434	9.1	K5	36 32.765	0.15	4	68.746	-67 54 25.18	0.15	4	68.746				19361
10317	-49	5423	8.0	K5	36 36.796	0.07	4	69.743	-49 28 53.47	0.12	4	69.743				1269
10318	-42	6390	6.22	F5	10 36 38.218	0.11	6	69.317	-42 29 34.02	0.14	6	69.317	2853	14640		32853
10319	-25	8168	7.36	F5	36 47.077	0.07	4	69.164	-25 35 24.88	0.11	4	69.164		14644		9819
10320	-29	8502	8.5	K5	36 54.385	0.06	4	69.644	-29 37 56.23	0.05	4	69.644				9820
10321	-1	2419	8.7	K0	37 01.848	0.03	2	70.655	-2 05 09.95	0.05	2	70.655				9821
10322	-20	3233	8.6	G0	37 04.451	0.10	4	69.688	-20 35 21.71	0.08	4	69.688				9822
10323	-32	7521	8.2	K0	10 37 08.666	0.11	4	70.087	-32 33 09.86	0.14	4	70.087				9823
10324	-12	3228	7.8	A2	37 08.858	0.05	2	70.669	-12 44 00.15	0.28	2	70.669				9824
10325	-54	3912	7.40	K5	37 09.206	0.13	4	69.675	-54 36 01.77	0.11	4	69.675		14658		9825
10326	-37	6699	7.98	G5	37 14.285	0.13	4	69.731	-37 33 02.30	0.08	4	69.731		14661		9826
10327	-61	1769	7.5	K0	37 15.569	0.08	4	69.681	-61 31 54.57	0.12	4	69.681				9827
10328	-21	3122	7.7	K0	10 37 18.295	0.02	4	69.738	-22 16 10.43	0.08	4	69.738				9828
10329	-54	3915	4.37	G0	37 18.613	0.03	83	71.149	-55 20 32.52	0.04	82	71.147	402	14662	2524	30402
10330	-39	6554	8.1	K2	37 22.355	0.15	4	69.728	-39 42 01.33	0.06	4	69.728				9829
10331	+2	2346	8.2	K5	37 24.077	0.27	2	70.700	+1 32 57.13	0.28	2	70.700				9830
10332	-60	2120	7.5	G5	37 33.815	0.12	5	70.358	-60 49 26.53	0.12	4	70.614				9831
10333	-32	7529	7.41	K0	10 37 34.241	0.08	4	69.714	-33 21 06.25	0.14	4	69.714		14667		9832
10334	-61	1772	9.10	F8	37 40.019	0.06	4	70.235	-62 00 47.26	0.23	4	70.235		14672		9833
10335	+0	2688	9.0	K2	37 40.305	0.18	5	72.231	+0 23 36.84	0.24	3	72.594				9834
10336	-0	2362	8.8	G0	37 40.761	0.10	3	72.526	-0 38 01.93	0.04	3	72.526				9835
10337	-15	3103	8.8	G5	37 42.436	0.14	2	71.629	-16 06 37.76	0.20	2	71.629				9836

10280 A 7852, 7.5m-7.9m, 0°3.

10291 11.2m, 8°1, 69°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
10338	-5	3120	8.0	K2	10	37 44.552	0.14	2	71.691	-6 25 46.04	0.08	2	71.691				9837
10339	+5	2374	8.4	K0		37 45.004	0.01	2	71.706	+4 48 04.34	0.19	2	71.706				9838
10340	-8	2976	7.9	K2		37 45.048	0.27	2	70.688	-8 46 58.33	0.45	2	70.688				9839
10341	-18	2995	8.6	K2		37 48.306	0.16	2	71.745	-18 31 42.11	0.29	2	71.745				9840
10342	+4	2367	8.6	K5		37 50.502	0.04	3	71.206	+4 17 35.06	0.07	3	71.206				9841
10343	-48	5822	6.90	K5	10	37 51.268	0.07	6	70.248	-49 01 07.30	0.10	6	70.248	2854	14674		32854
10344	-38	6650	8.9	K		38 02.756	0.17	4	70.129	-38 33 26.11	0.10	4	70.129				9842
10345	+1	2468	8.8	F2		38 13.667	0.21	2	70.679	+0 46 17.36	0.19	2	70.679				9843
10346	-77	630	9.4	M3		38 22.760	0.03	4	69.689	-77 41 42.53	0.13	4	69.689				19362
10346 SP						38 22.327	0.88	3	71.350	-77 41 40.02	1.00	2	71.648				19362
10347	-14	3161	8.4	K2	10	38 22.859	0.27	2	70.826	-14 56 47.22	0.14	2	70.826				9844
10348	+0	2690	9.0	F8		38 23.301	0.03	2	71.794	-0 24 28.07	-	1	72.175				9845
10349	-26	8070	7.82	G5		38 24.965	0.08	4	70.158	-26 31 26.26	0.08	4	70.158		14684		9846
10350	-65	1449	9.1	K0		38 26.045	0.15	4	70.172	-65 52 39.33	0.13	4	70.172				19363
10351	-11	2929	8.5	F8		38 28.927	0.09	2	72.254	-11 56 04.77	0.14	2	72.254				9847
10352	-35	6645	8.8	G5	10	38 33.073	0.05	4	69.659	-36 19 40.93	0.09	4	69.659				9848
10353	-56	3647	8.0	G5		38 34.155	0.16	4	69.767	-56 55 08.29	0.15	4	69.767				9849
10354	-35	6646	6.51	G5		38 34.275	0.10	6	69.948	-35 28 48.96	0.13	6	69.948	2856	14689	2526	32856
10355	-63	1558	7.8	K0		38 34.695	0.21	5	70.696	-63 44 50.10	0.07	4	70.551				9850
10356	-3	2976	8.7	F5		38 37.166	0.13	2	69.822	-3 30 02.15	0.11	2	69.822				9851
10357	-52	3805	7.7	K2	10	38 46.853	0.04	4	70.249	-53 06 51.30	0.21	4	70.249				9852
10358	-23	9461	8.5	K0		38 47.154	0.14	4	70.216	-24 00 04.36	0.06	4	70.216				9853
10359	-0	2364	6.40	K0		38 51.345	0.02	111	71.173	-1 28 44.16	0.03	107	71.134	404	14694	2529	80404
10360	-58	2533	8.7	K0		39 00.597	0.28	4	69.631	-58 37 38.65	0.16	4	69.631				9854
10361f	+0	2694	8.1	F0		39 01.752	-	1	72.031	-0 00 38.76	-	1	72.031				9855
10362	-29	8525	8.4	A0	10	39 05.573	0.02	4	70.218	-30 16 20.94	0.15	4	70.218				9856
10363	-7	3094	7.48	K2		39 21.751	0.05	2	70.680	-7 47 38.83	0.02	2	70.680		14706	2531	9857
10364	-3	2977	8.3	F2		39 22.779	0.25	2	70.679	-3 48 44.59	0.01	2	70.679			2532	9858
10365	+3	2403	8.5	K0		39 37.557	0.01	2	71.635	+3 03 31.31	0.22	2	71.635				9859
10366	-72	1008	7.8	M1		39 46.979	0.11	4	70.030	-73 01 17.38	0.10	4	70.030				19364
10367	+1	2471	7.4	K2	10	39 47.728	0.20	3	71.521	+1 07 27.01	0.18	3	71.521				9860
10368	-70	1168	8.9	K5		39 50.045	0.09	4	69.218	-71 22 32.15	0.20	4	69.218				19365
10369	-77	636	8.8	K5		39 52.567	0.13	4	70.100	-78 13 50.79	0.14	4	70.100				19366
10369 SP						39 52.229	0.30	4	70.738	-78 13 49.96	0.20	4	70.738				19366
10370	-39	6590	8.65	K0		39 56.668	0.12	4	69.701	-39 25 58.63	0.19	4	69.701		14721		9861
10371	-19	3080	7.7	A2	10	39 56.830	0.15	4	69.169	-20 20 28.35	0.11	4	69.169				9862
10372	-5	3125	8.7	F0		39 57.863	0.00	2	71.730	-5 33 02.69	0.17	2	71.730				9863
10373*	-35	6668	8.4	G5		40 02.542	0.06	4	70.190	-35 56 25.25	0.33	4	70.190				9864
10374	-13	3197	6.44	K2		40 03.188	0.04	2	70.679	-13 42 44.73	0.10	2	70.679		14724		9865
10375	-46	6361	7.12	K0		40 12.455	0.08	6	70.025	-46 57 28.68	0.09	6	70.025	2857	14726		1270
10376	-16	3112	8.6	K5	10	40 13.188	0.07	2	71.324	-17 18 23.82	0.11	2	71.324				9866
10377	-41	6058	7.9	K5		40 22.142	0.12	4	70.332	-41 38 30.15	0.22	4	70.332				1271
10378	-32	7572	5.73	A0		40 23.832	0.02	92	70.893	-32 27 12.40	0.03	92	70.893	1277	14732	2536	31277
10379	-3	2980	8.2	K5		40 31.116	0.04	2	71.282	-4 08 41.54	0.50	2	71.282				9867
10380	-0	2366	8.9	G5		40 32.751	0.01	2	70.886	-1 12 54.88	0.05	2	70.886				9868
10381	-54	3962	8.5	K0	10	40 34.941	0.15	4	69.750	-55 09 21.19	0.09	4	69.750				9869
10382	+23	2253	5.05	A2		40 41.819	0.16	9	71.543	+23 27 02.38	0.17	8	71.579	405	14740	2539	30405
10383	-10	3119	8.5	A0		40 43.881	0.14	3	72.214	-10 47 48.99	0.06	2	72.276				9870
10384	-34	6929	8.4	K0		40 48.443	0.11	4	70.707	-35 21 01.01	0.19	4	70.707				9871
10385	-22	2992	8.2	K2		41 07.391	0.09	4	70.421	-22 51 59.47	0.12	4	70.421				9872
10386	-63	1599	3.03	B0	10	41 09.958	0.04	41	70.827	-64 07 55.43	0.06	39	70.832	406	14755	2542	30406
10387	-24	9268	8.3	G5		41 13.470	0.09	4	69.685	-24 49 27.55	0.06	4	69.685				9873
10388	-2	3207	8.6	K0		41 13.776	0.04	3	72.225	-2 55 30.98	0.39	2	72.282				9874
10389f	-48	5870	8.5	K0		41 18.327	0.07	4	70.286	-49 11 28.31	0.10	4	70.286				1272
10390	-38	6693	7.08	G0		41 20.375	0.05	6	70.383	-38 47 45.04	0.09	6	70.383	2858	14757	2543	32858
10391	-79	548	6.18	B5	10	41 20.690	0.04	5	70.705	-79 31 15.79	0.15	5	70.705		14758		21032
10392	-5	3133	8.2	K0		41 22.424	0.02	2	72.205	-5 48 56.77	0.01	2	72.205				9875
10393	-13	3204	8.7	K2		41 24.576	0.25	2	72.291	-13 36 37.63	0.14	2	72.291				9876
10394	-66	1386	8.4	K5		41 35.533	0.09	4	69.645	-67 01 37.41	0.19	4	69.645				19367
10395	-37	6763	8.9	F8		41 35.646	0.16	5	71.247	-37 35 19.33	0.12	5	71.247				9877
10396	-43	6512	8.5	K5	10	41 41.718	0.08	4	70.682	-43 29 02.79	0.15	4	70.682				1273
10397	-12	3252	8.6	K5		41 43.227	0.31	2	71.691	-12 31 39.72	0.09	2	71.691				9878
10398	-33	7207	8.9	F2		41 53.593	0.12	4	70.670	-33 59 42.25	0.14	4	70.670				9879
10399	-64	1452	8.2	K0		41 53.803	0.16	4	70.122	-65 12 59.63	0.26	4	70.122				19368
10400	-27	7653	8.7	F2		42 01.400	0.16	4	70.252	-28 16 00.92	0.26	4	70.252				9880
10401	-1	2435	8.8	G5	10	42 01.497	0.13	2	72.268	-2 12 40.22	0.02	2	72.268				9881
10402	-63	1619	6.14	B3		42 02.960	0.08	7	71.023	-63 59 10.47	0.07	7	71.023		14769		21033
10403	-23	9500	6.81	K0		42 04.110	0.11	6	69.730	-23 43 21.42	0.08	6	69.730	2859	14771	2545	32859
10404	-68	1278	8.6	A5		42 07.504	0.10	4	70.618	-69 11 09.13	0.14	4	70.618				19369
10405	-52	3864	8.0	K0		42 10.775	0.21	4	70.662	-52 46 23.33	0.21	3	70.457				9882
10406	-53	4094	8.4	G5	10	42 11.588	0.07	5	70.658	-54 22 12.05	0.24	5	70.658				9883
10407	-9	3133	8.5	K5		42 16.776	0.13	2	71.227	-9 40 27.11	0.20	2	71.227				9884
10408	-63	1623	5.09	B3		42 17.948	0.10	6	71.019	-63 41 53.55	0.19	6	71.019		14778		21034
10409	-57	3748	8.6	K2		42 22.813	0.09	4	70.552	-58 08 16.41	0.14	4	70.552				9885
10410	-75	685	8.7	G5		42 25.369	0.15	5	70.475	-76 19 04.08	0.15	5	70.475				19370

10361 A 7885A, 10.9m, 6°1, 295°.
10373 9.2m-9.3m, 0°2.

10389 10.6m, 5°1, 201°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	PK4	GC	N30	No°
10410	SP				10 42 25.290	0.50	4	70.385	-76 19 03.56	0.52	4	70.385				19370
10411		-86 210	7.62	G5	42 29.978	0.10	4	69.739	-86 38 08.25	0.08	4	69.739		14787		19371
10411	SP				42 29.879	0.16	4	70.141	-86 38 08.11	0.39	4	70.141		14787		19371
10412		-34 6949	8.0	A5	42 32.413	0.14	4	69.758	-35 04 51.63	0.10	4	69.758				18446
10413		+ 3 2408	6.57	K2	42 34.795	0.34	2	71.338	+ 2 45 04.71	0.31	2	71.338		14789		9886
10414		+ 4 2379	8.1	K2	10 42 38.287	0.18	2	70.685	+ 3 59 35.62	0.13	2	70.685				9887
10415		-60 2242	8.5	K0	42 39.738	0.23	4	70.159	-61 18 55.19	0.20	4	70.159				9888
10416		-50 5390	8.5	G5	42 40.973	0.08	4	70.728	-50 37 19.01	0.19	4	70.728				1274
10417		-29 8571	7.80	K2	42 42.688	0.09	4	70.257	-29 25 13.71	0.09	4	70.257		14790		9889
10418		-30 8694	8.1	K5	42 46.540	0.10	5	70.581	-31 04 26.89	0.14	4	70.203				9890
10419		-63 1629	8.2	K0	10 42 51.347	0.15	6	71.321	-63 32 47.50	0.19	5	71.158				9891
10420		+ 1 2477	8.1	K0	42 55.094	0.01	2	71.670	+ 1 16 26.79	0.23	2	71.670				9892
10421		-42 6468	9.0	K0	42 59.420	0.12	4	70.161	-42 34 35.52	0.07	4	70.161				1275
10422		-59 2611	7.6	K0	43 01.030	0.11	5	70.629	-59 40 18.57	0.15	5	70.629				9893
10423		- 6 3227	8.9	A0	43 03.783	0.06	2	70.775	- 7 19 02.21	0.15	2	70.775				9894
10424		-57 3765	7.6	K0	10 43 11.274	0.18	5	69.978	-57 28 11.61	0.07	4	70.139				9895
10425		-49 5507	9.0	K5	43 17.510	0.09	5	71.253	-50 10 31.13	0.11	4	71.038				1276
10426		- 9 3134	7.4	A0	43 18.526	0.01	2	72.297	-10 27 00.39	0.38	2	72.297				9896
10427		-32 7617	8.9	--	43 19.729	0.18	5	70.606	-32 49 20.40	0.06	4	70.442				9897
10428		-48 5900	8.0	K2	43 23.662	0.12	4	70.235	-48 58 40.73	0.28	4	70.235				1277
10429		-16 3122	8.7	K5	10 43 25.197	0.32	2	72.298	-16 50 14.57	0.33	2	72.298				9898
10430		-20 3261	8.2	A5	43 26.533	0.08	4	70.187	-20 42 38.40	0.15	4	70.187				9899
10431		-18 3020	8.5	K0	43 28.603	0.13	2	72.327	-19 23 13.39	0.03	2	72.327				9900
10432		+ 7 2356	6.29	K0	43 29.487	0.05	23	71.395	+ 6 38 13.11	0.07	20	71.363	1278	14805	2549	31278
10433		- 5 3139	8.8	K2	43 30.261	0.15	2	72.324	- 6 11 37.84	0.11	2	72.324				9901
10434		-15 3123	8.3	G5	10 43 31.031	0.14	2	72.306	-16 28 21.14	0.14	2	72.306		14806		9902
10435		-36 6659	7.72	K0	43 32.019	0.12	4	70.631	-36 40 48.43	0.10	4	70.631		14808		9903
10436		+ 0 2699	8.9	A0	43 32.748	0.07	2	72.793	+ 0 21 40.35	0.02	2	72.793				9904
10437		-30 8705	8.0	K2	43 33.339	0.08	4	71.483	-30 35 31.49	0.17	4	71.483				9905
10438		- 1 2440	8.5	K2	43 38.800	0.02	2	72.787	- 2 10 47.66	0.15	2	72.787				9906
10439		-63 1637	9.1	G0	10 43 39.052	0.14	6	71.594	-63 57 56.94	0.13	6	71.594				19372
10440		+19 2371	5.64	K0	43 43.203	0.04	26	71.093	+19 09 19.57	0.05	25	71.046	1279	14813	2550	81279
10441		+14 2294	5.64	K0	43 46.303	0.14	6	71.096	+14 27 31.51	0.16	6	71.096	2860	14814		32860
10442		-44 6787	8.5	K0	43 48.878	0.15	4	70.202	-44 26 28.23	0.06	4	70.202				1278
10443		-26 8131	7.5	K0	43 54.343	0.08	4	70.676	-26 27 44.85	0.15	4	70.676				9907
10444		-34 6963	8.9	K5	10 43 54.799	0.15	4	70.637	-34 31 50.24	0.19	4	70.637				9908
10445		-45 6373	8.8	G8	43 57.424	0.25	4	70.750	-45 31 35.93	0.30	4	70.750				1279
10446		+ 5 2394	7.9	K0	43 58.154	0.01	2	71.653	+ 4 54 37.77	--	1	72.028		14818		9909
10447		-18 3023	7.53	K2	44 06.246	0.02	2	72.220	-18 36 35.89	0.07	2	72.220		14821		9910
10448		-27 7672	8.0	F5	44 06.618	0.18	4	71.185	-27 52 36.69	0.20	3	71.513				9911
10449		- 0 2372	8.8	K0	10 44 09.273	0.10	2	70.810	- 1 25 22.99	0.27	2	70.810				9912
10450		-14 3179	8.8	K5	44 13.296	0.19	2	71.629	-15 14 34.54	0.03	2	71.629				9913
10451		-62 1746	8.52	F8	44 16.003	0.12	4	69.749	-62 34 22.37	0.25	4	69.749		14824		9914
10452		- 4 2946	8.0	A2	44 16.897	0.09	2	70.821	- 5 07 04.12	0.30	2	70.821				9915
10453		-46 6432	9.5	G5	44 17.476	0.09	5	71.251	-47 22 08.26	0.23	5	71.251				1280
10454		-69 1372	8.9	K0	10 44 18.566	0.07	4	70.191	-70 09 54.99	0.19	4	70.191				19373
10455		-25 8237	6.86	K0	44 19.713	0.03	48	70.694	-25 47 05.07	0.03	46	70.603	1280	14829	2551	81280
10456		-40 6288	8.3	G5	44 21.600	0.07	4	69.783	-41 03 34.43	0.20	4	69.783				1281
10457		-14 3181	7.01	A0	44 30.690	0.04	2	69.684	-15 28 04.47	0.14	2	69.684		14839		9916
10458		-11 2941	8.6	F2	44 37.561	0.16	2	70.829	-11 45 20.78	0.50	2	70.829				9917
10459		-16 3127	9.0	A5	10 44 42.987	0.04	4	71.735	-17 09 36.43	0.11	3	71.616				9918
10460		-23 9532	7.8	A5	44 44.594	0.10	4	70.389	-24 17 06.41	0.14	4	70.389				9919
10461		- 0 2374	8.5	K0	44 48.411	0.12	2	70.700	- 1 27 38.95	0.07	2	70.700				9920
10462		-44 6800	9.1	M0	44 52.309	0.07	4	70.123	-44 37 42.27	0.10	4	70.123				1282
10463		-63 1655	5.10	B5	45 01.591	0.07	6	70.632	-64 07 10.47	0.14	6	70.632		14850		21035
10464		-67 1504	9.2	G0	10 45 03.396	0.06	4	69.698	-67 59 30.04	0.04	4	69.698				19374
10465		-51 5039	8.5	K2	45 03.952	0.14	5	70.582	-51 42 29.65	0.19	5	70.582				1283
10466		-21 3154	8.4	K0	45 06.297	0.10	4	69.621	-22 05 01.17	0.08	4	69.621				9921
10467		-68 1302	6.63	A2	45 09.840	0.08	6	69.718	-68 56 44.89	0.08	6	69.718	2861	14854		32861
10468		-79 556	4.62	B3	45 19.859	0.05	40	71.177	-80 16 34.81	0.06	39	71.179	411	14863	2554	30411
10468	SP				10 45 19.872	0.05	22	70.856	-80 16 34.82	0.15	21	70.875		14863	2554	50411
10469		+ 3 2415	8.6	G5	45 23.922	0.13	2	70.841	+ 2 55 03.22	0.34	2	70.841				9922
10470		-19 3104	8.1	F0	45 27.512	0.08	4	70.478	-20 04 31.79	0.16	4	70.478			2555	9923
10471		-39 6674	8.5	K0	45 29.250	0.12	4	70.084	-39 28 33.70	0.07	4	70.084				9924
10472		-42 6497	8.8	K2	45 34.119	0.12	4	69.721	-43 12 10.87	0.22	4	69.721				1284
10473		-79 557	9.1	K0	10 45 38.010	0.22	4	69.616	-79 32 41.83	0.12	4	69.616				19375
10473	SP				45 38.064	0.23	2	70.244	-79 32 42.26	0.46	2	70.244				19375
10474		-76 639	9.3	F2	45 39.586	0.06	4	69.261	-77 20 12.38	0.23	4	69.261				19376
10474	SP				45 39.505	0.46	3	70.427	-77 20 12.30	0.75	3	70.427				19376
10475		-37 6815	8.1	K5	45 52.667	0.14	4	69.697	-38 22 10.46	0.15	4	69.697				9925
10476		-55 3856	8.3	K0	10 45 53.067	0.15	4	69.623	-55 42 46.85	0.19	4	69.623				9926
10477		-20 3272	8.0	A5	45 53.652	0.06	4	69.267	-20 54 44.46	0.05	4	69.267				9927
10478		-49 5547	8.8	K0	45 55.511	0.13	5	70.148	-50 06 18.55	0.09	5	70.148				1285
10479		- 2 3221	8.0	F5	45 59.563	0.07	2	70.647	- 2 59 27.30	0.04	2	70.647				9928
10480		-40 6310	9.0	K0	46 03.101	0.12	5	70.595	-41 00 44.58	0.14	4	70.429				1286

10426 7.4m-10.9m, 173, 339°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
10481	-59	2720	6.12	A2p	10 46 07.579	0.11	6	69.074	-59 39' 16.84	0.12	6	69.074	2862	14878		32862
10482	-7	3116	8.7	K2	46 08.006	0.36	2	70.765	-8 01 48.98	0.05	2	70.765				9929
10483	-63	1675	8.49	K0	46 15.823	0.22	4	69.615	-63 36 56.14	0.18	3	69.061		14881		9931
10484	-21	3158	8.7	K2	46 15.848	0.17	4	70.210	-22 09 07.60	0.13	4	70.210				9930
10485	-58	2733	8.7	K5	46 24.627	0.24	4	69.728	-58 56 59.16	0.13	4	69.728				9932
10486	-11	2954	8.8	G5	10 46 32.036	0.44	2	70.822	-11 44 55.87	0.16	2	70.822				9933
10487	-4	2952	7.5	K0	46 37.421	0.24	2	71.342	-5 08 31.66	0.10	3	71.358				9934
10488	+11	2283	5.27	A0	46 37.790	0.02	89	71.007	+10 48 36.25	0.04	85	70.988	409	14889	2558	80409
10489	-52	3930	8.7	G5	46 38.602	0.18	4	69.721	-53 03 47.78	0.13	4	69.721				9935
10490	+4	2385	8.0	A2	46 48.422	0.22	2	71.694	+3 42 17.88	0.13	2	71.694				9936
10491	-29	8630	8.6	K5	10 46 48.853	0.09	4	70.264	-29 29 59.42	0.07	4	70.264				9937
10492	-35	6761	9.0	K5	46 51.195	0.27	3	69.522	-35 40 47.44	0.20	3	69.522				9938
10493	-45	6418	9.0	K0	47 01.950	0.06	4	69.767	-46 13 48.44	0.12	4	69.767				1287
10494	-11	2957	8.2	K2	47 03.494	0.26	2	71.539	-11 41 45.18	0.04	2	71.539				9939
10495	+28	1931	6.12	F5	47 09.041	0.19	6	70.388	+28 14 18.87	0.14	6	70.388	2863	14897	2559	32863
10496	-15	3138	3.32	K0	10 47 09.468	0.03	81	71.217	-15 55 49.16	0.03	81	71.193	410	14898	2560	30410
10497	+1	2486	8.4	K2	47 10.010	0.08	2	71.743	+1 12 35.20	0.42	2	71.743				9940
10498	-41	6153	8.0	K0	47 12.536	0.12	4	70.100	-41 32 30.78	0.08	4	70.100				1288
10499	-29	8636	7.3	G0	47 13.670	0.21	4	70.299	-29 43 45.95	0.24	4	70.299				9941
10500	-9	3148	8.4	K0	47 19.463	0.13	3	71.199	-9 59 12.18	0.08	2	70.753				9942
10501	-1	2451	8.5	K5	10 47 23.271	0.06	2	72.293	-1 41 38.49	0.10	2	72.293				9943
10502	-30	8752	8.1	K0	47 25.237	0.20	4	69.766	-31 08 57.85	0.12	4	69.766				9944
10503	-13	3223	8.4	K5	47 27.013	0.18	3	71.902	-13 45 24.89	0.14	3	71.902				9945
10504	-6	3237	7.9	K0	47 27.689	0.10	2	70.885	-7 13 01.27	0.08	2	70.885				9946
10505	-59	2761	8.2	G0	47 29.565	0.03	4	69.567	-60 01 46.71	0.11	4	69.567				9947
10506	-47	6240	8.8	F8	10 47 37.522	0.15	4	69.741	-47 30 02.98	0.20	4	69.741				1289
10507	-68	1323	9.0	*	47 39.034	0.05	4	70.044	-68 28 53.82	0.14	4	70.044				19377
10508	-32	7674	9.0	K0	47 42.906	0.14	4	70.153	-33 00 32.71	0.05	4	70.153				9948
10509	-8	3017	7.6	K0	47 43.028	0.11	2	71.195	-8 43 25.18	0.18	2	71.195		14905		9949
10510	-44	6835	8.6	K0	47 43.193	0.07	4	69.698	-45 20 17.29	0.22	4	69.698				1290
10511	-8	3018	5.78	A2	10 47 47.455	0.04	41	71.267	-8 37 56.98	0.05	38	71.242	1281	14906	2561	31281
10512	-51	5081	9.0	K0	47 54.955	0.11	4	70.060	-52 02 08.84	0.10	4	70.060				1291
10513	-5	3151	8.3	F8	47 56.339	0.01	2	71.715	-5 24 33.95	0.13	2	71.715				9950
10514	-29	8647	9.0	K2	47 56.763	0.04	4	70.495	-30 16 22.96	0.17	4	70.495				9951
10515	-35	6778	9.0	K0	47 59.311	0.24	4	69.666	-36 14 31.75	0.28	4	69.666				9952
10516	-37	6849	9.2	G5	10 48 00.245	0.10	4	69.713	-37 24 25.70	0.19	4	69.713				9953
10517	-3	3003	8.7	G0	48 13.830	0.10	3	71.256	-4 28 23.26	0.12	2	71.253				9954
10518	-37	6851	8.8	K2	48 14.071	0.20	4	69.702	-38 07 57.71	0.10	4	69.702				9955
10519	-24	9350	8.4	K0	48 17.486	0.12	4	69.218	-25 15 25.98	0.07	4	69.218				9956
10520	-14	3202	8.4	F2	48 26.103	0.06	3	71.490	-14 37 33.73	0.37	3	71.490				9957
10521	-59	2775	7.36	M0	10 48 27.430	0.11	4	69.622	-59 43 01.39	0.21	4	69.622		14917		9958
10522	-16	3136	8.8	K0	48 42.026	0.12	2	69.818	-17 13 16.37	0.14	2	69.818				9959
10523	-20	3280	7.7	K5	48 48.716	0.16	4	69.766	-21 15 31.44	0.20	4	69.766				9960
10524	-50	5463	8.35	K0	48 51.085	0.07	4	68.719	-51 09 37.89	0.02	4	68.719		14926		1292
10525	-12	3280	8.6	K5	48 52.150	0.05	2	70.699	-12 33 15.77	0.13	2	70.699				9961
10526	-27	7723	8.3	K5	10 48 53.436	0.07	4	69.683	-27 37 13.36	0.09	4	69.683				9962
10527	+0	2706	9.0	P5	48 56.208	0.18	2	70.737	-0 13 05.50	0.00	2	70.737				9963
10528	-22	3016	7.8	G5	48 56.557	0.14	4	70.167	-23 25 25.45	0.05	4	70.167				9964
10529	-31	8585	9.0	K2	49 05.786	0.17	4	69.642	-32 22 32.07	0.16	4	69.642				9965
10530	-7	3129	8.6	P5	49 10.118	0.18	2	70.567	-7 48 15.30	0.19	2	70.567				9966
10531	+1	2492	9.0	K5	10 49 11.879	0.05	2	69.770	+1 21 42.02	0.14	2	69.770				9967
10532	-33	7305	8.0	M0	49 12.974	0.05	4	69.656	-34 16 19.33	0.10	4	69.656				9968
10533	-34	7029	9.1	F0	49 13.541	0.06	4	69.681	-35 07 57.17	0.15	4	69.681				18447
10534	-61	1923	8.32	K0	49 27.709	0.09	5	69.526	-62 05 52.33	0.20	4	69.574		14935		9969
10535	+4	2390	8.8	K5	49 40.517	0.10	2	69.777	+4 01 54.00	0.18	2	69.777				9970
10536	-51	5105	8.0	K0	10 49 41.631	0.05	4	68.714	-52 07 08.08	0.13	4	68.714				9971
10537	-18	3044	8.6	K5	49 55.525	0.03	2	69.852	-18 37 30.35	0.00	2	69.852				9972
10538	+0	2710	6.59	K5	50 02.373	0.21	2	70.715	+0 03 52.39	0.01	2	70.715		14952		9973
10539	-29	8677	8.1	K0	50 07.718	0.04	4	68.760	-29 54 59.74	0.10	4	68.760				9974
10540	-56	3938	7.8	K2	50 07.964	0.14	4	69.199	-57 06 53.77	0.15	4	69.199				9975
10541	-0	2380	8.6	K0	10 50 08.507	0.41	2	70.750	-1 16 19.48	0.18	2	70.750				9976
10542	+2	2367	7.2	M0	50 10.825	0.05	2	70.679	+2 22 42.34	0.26	2	70.679				9977
10543	-15	3150	7.7	K5	50 12.624	0.15	2	70.722	-16 19 20.43	0.14	2	70.722				9978
10544	-10	3141	7.5	G0	50 15.107	0.09	2	70.647	-11 09 26.96	0.02	2	70.647				9979
10545	-6	3252	7.20	F8	50 17.938	0.08	6	68.696	-6 33 15.56	0.08	6	68.696	2867	14957		32867
10546	-25	8295	8.3	K5	10 50 18.438	0.07	4	69.150	-26 18 46.74	0.15	4	69.150				9980
10547	-42	6553	8.5	K0	50 21.415	0.06	4	69.642	-43 19 07.21	0.27	4	69.642				1293
10548	-56	3947	5.57	B8p	50 27.564	0.06	6	68.689	-56 58 27.77	0.09	6	68.689	2868	14960	2563	32868
10549	+34	2172	3.92	K0	50 31.426	-	1	73.009	+34 28 58.73	-	1	73.009	412	14961	2564	30412
10550	-41	6191	8.2	K5	50 32.500	0.09	4	69.667	-41 26 09.67	0.09	4	69.667				1294
10551	-27	7744	8.53	K5	10 50 46.225	0.07	4	69.184	-28 06 40.08	0.11	4	69.184		14966		9981
10552	-72	1057	9.2	G	50 56.741	0.09	4	69.873	-72 55 13.27	0.10	4	69.873				19378
10553	-53	4209	8.2	K0	50 58.717	0.18	5	70.192	-54 08 47.73	0.15	5	70.192				9982
10554	-66	1447	8.9	K5	51 01.477	0.11	4	69.715	-67 15 18.78	0.19	4	69.715				19379
10555	-73	778	8.9	A0	51 02.100	0.03	4	69.612	-73 28 08.02	0.31	4	69.612				19380

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
10556	-38	6804	8.6	K2	10 51 03.783	0.13	4	69.687	-38 36' 14.59	0.09	4	69.687				9983
10557	-14	3213	6.56	K0	51 04.357	0.07	2	70.755	-15 10 44.78	0.11	2	70.755	14972			9984
10558	-0	2382	8.8	F8	51 06.528	0.14	2	69.818	-1 05 15.67	0.09	2	69.818				9985
10559	-3	3013	8.8	A5	51 09.372	0.09	2	71.631	-4 02 15.75	0.16	2	71.631				9986
10560	-49	5636	8.2	K0	51 10.091	0.07	4	69.700	-50 19 23.43	0.12	4	69.700				1295
10561	-68	1346	7.4	K2	10 51 12.619	0.16	4	69.696	-68 51 19.55	0.17	4	69.696				19381
10562	+3	2429	8.2	F0	51 17.192	0.10	2	71.541	+2 55 27.69	0.06	2	71.541				9987
10563	+4	2394	8.1	F5	51 18.670	0.21	2	70.683	+3 58 05.06	0.26	2	70.683				9988
10564	-3	3015	8.5	F5	51 28.760	0.01	2	69.681	-3 46 29.57	0.02	2	69.681				9989
10565	-50	5487	7.23	K0	51 31.612	0.23	5	70.505	-51 13 57.98	0.15	5	70.505	14983			1296
10566	-64	1523	9.3	G0	10 51 32.292	0.16	4	70.208	-64 32 30.17	0.16	4	70.208				19382
10567	-42	6572	7.43	K0	51 32.660	0.20	4	69.664	-42 51 03.05	0.22	4	69.664	14984			1297
10568	-5	3161	8.7	K2	51 40.315	0.10	2	71.554	-6 27 47.03	0.22	2	71.554				9990
10569	-32	7730	8.6	K0	51 45.417	0.16	4	69.703	-32 31 31.39	0.03	4	69.703				9991
10570	-12	3293	5.84	G0	51 48.698	0.06	6	69.018	-13 29 29.53	0.07	6	69.018	2871	14994	2568	32871
10571	-39	6761	8.8	K0	10 51 54.238	0.09	4	69.690	-39 56 35.91	0.12	4	69.690				9992
10572	-48	6024	8.0	K0	51 54.898	0.04	4	69.718	-48 53 55.38	0.04	4	69.718				1298
10573	-43	6625	9.1	G5	51 56.251	0.22	4	70.465	-43 24 50.40	0.08	4	70.465				1299
10574	-19	3131	8.1	A3	52 01.691	0.11	4	69.646	-19 58 02.58	0.06	4	69.646	15000			9993
10575	-32	7736	8.8	K5	52 05.003	0.07	5	69.700	-33 14 09.18	0.14	4	69.772				9994
10576	-7	3138	8.6	K0	10 52 06.755	0.07	3	71.459	-8 26 15.74	0.17	3	71.459				9995
10577	-61	1955	9.0v	K5	52 08.491	0.04	5	70.324	-61 46 32.98	0.11	4	70.571	15004			9996
10578	-47	6312	8.5	K0	52 15.953	0.12	4	70.143	-48 16 14.52	0.10	4	70.143				1300
10579	-2	3247	8.3	F0	52 16.287	0.16	2	69.750	-2 34 48.95	0.08	2	69.750				9997
10580	-49	5647	9.0	K0	52 17.680	0.17	5	70.583	-49 31 53.75	0.20	5	70.583				1301
10581	-46	6555	9.0	K2	10 52 31.477	0.12	4	70.613	-46 39 54.69	0.21	4	70.613				1302
10582	-45	6497	8.5	K5	52 38.579	0.09	4	70.701	-46 18 58.76	0.16	4	70.701				1303
10583	-16	3149	8.6	G5	52 42.145	0.11	2	70.650	-16 31 46.17	0.01	2	70.650				9998
10584	-11	2974	7.70	K0	52 44.747	0.09	2	71.323	-11 51 17.41	0.28	2	71.323	2872	15015	2570	9999
10585	-19	3134	6.55	K0	52 44.951	0.08	6	69.322	-20 23 53.11	0.10	6	69.322				32872
10586	-6	3266	8.6	K2	10 52 52.065	0.03	3	71.258	-6 41 37.13	0.39	2	71.264				10000
10587	-29	8713	8.9	K2	52 55.745	0.33	5	68.867	-30 21 07.88	0.10	5	68.867				10001
10588	-12	3298	8.7	A5	52 57.662	0.09	2	70.780	-13 09 58.31	0.15	2	70.780				10002
10589	-14	3223	8.8	K0	52 58.545	0.03	2	70.744	-15 22 15.97	0.02	2	70.744				10003
10590*	-30	8823	8.7	F5	52 59.036	0.12	4	69.227	-31 01 07.98	0.12	4	69.227				10004
10591*	-34	7078	8.0	A0	10 52 59.568	0.07	4	70.692	-35 13 48.66	0.14	4	70.692				10005
10592	-33	7358	8.7	K2	53 05.643	0.16	4	70.632	-34 10 49.08	0.19	4	70.632				10006
10593	-4	2975	7.9	G5	53 11.624	0.02	2	70.706	-5 17 02.21	0.19	2	70.706				10007
10594	-44	6928	9.4	K0	53 21.765	0.08	4	70.726	-44 26 01.75	0.15	4	70.726				1304
10595	-0	2390	8.6	G0	53 23.927	0.12	2	70.655	-0 44 06.88	0.32	2	70.655				10008
10596	-36	6796	8.8	K5	10 53 25.601	0.18	5	70.674	-36 24 41.27	0.04	4	70.527				10009
10597	-27	7764	8.3	K2	53 27.758	0.12	4	69.195	-27 33 11.76	0.10	4	69.195				10010
10598	+23	2279	6.24	K2	53 35.429	0.09	6	69.351	+22 37 07.86	0.08	6	69.351	2873	15035		32873
10599	+1	2502	6.86	K0	53 36.596	0.02	2	69.818	+0 42 00.60	0.12	2	69.818		15036		10011
10600	-22	3042	8.2	K5	53 41.411	0.15	4	69.662	-22 36 58.87	0.08	4	69.662				10012
10601	-40	6398	8.0	K5	10 53 45.906	0.09	4	70.080	-40 55 58.53	0.08	4	70.080				1305
10602	-56	4010	8.3	K2	53 46.150	0.05	4	68.648	-56 37 59.46	0.15	4	68.648				10013
10603	-9	3172	7.8	K2	53 49.506	0.12	2	70.654	-10 21 26.84	0.26	2	70.654				10014
10604	-24	9416	8.0	K0	53 51.065	0.05	4	69.185	-25 19 03.21	0.23	4	69.185				10015
10605	-69	1442	8.8	K0	53 58.101	0.03	4	69.102	-69 23 54.58	0.13	4	69.102				19383
10606	-54	4178	7.9	K2	10 54 08.641	0.20	4	69.566	-54 37 41.31	0.16	4	69.566				10016
10607	+0	2716	8.7	F2	54 11.171	0.20	3	71.108	-0 04 41.02	0.03	2	71.591				10017
10608	-57	4002	7.12	M0	54 12.211	0.08	5	69.209	-57 47 07.49	0.10	5	69.209	15045			10018
10609	+4	2397	8.7	K5	54 14.820	0.12	5	71.646	+3 43 03.41	0.09	5	71.646				10019
10610	-16	3152	8.3	G5	54 17.803	0.08	2	70.583	-17 11 01.06	0.07	2	70.583	15046			10020
10611	-56	4015	8.2	K5	10 54 18.702	0.13	4	69.649	-56 34 38.64	0.12	4	69.649				10021
10612	-36	6808	4.70	K0	54 23.085	0.02	123	71.212	-36 52 09.46	0.03	119	71.205	414	15047	2575	30414
10613	-17	3261	8.8	K2	54 25.455	0.09	2	70.817	-18 13 30.06	0.27	2	70.817				10022
10614	+0	2718	6.87	F5	54 34.450	0.07	2	71.289	-0 02 39.02	0.21	2	71.289	15053			10023
10615	-5	3173	8.6	F8	54 35.513	0.08	3	70.873	-6 13 48.16	0.22	3	70.873				10024
10616	-69	1447	8.3	K0	10 54 41.204	0.08	4	69.650	-70 10 54.02	0.21	4	69.650				19384
10617	-57	4007	7.9	K0	54 46.141	0.07	4	69.663	-58 23 23.09	0.08	4	69.663				10025
10618	-35	6855	8.2	K5	54 52.477	0.06	4	69.667	-35 56 53.64	0.09	4	69.667				10026
10619	-50	5534	6.16	A3	54 56.631	0.11	6	68.980	-50 29 50.76	0.13	6	68.980	2874	15057		32874
10620	-37	6936	8.9	G5	55 00.902	0.08	4	70.148	-37 27 21.43	0.10	4	70.148				10027
10621	-7	3147	8.2	K5	10 55 06.630	0.10	2	70.720	-8 01 07.94	0.25	2	70.720				10028
10622	-29	8745	8.5	K0	55 16.039	0.14	4	69.635	-29 59 31.41	0.07	4	69.635				10029
10623	-31	8664	8.8	K2	55 17.649	0.05	4	71.347	-31 38 54.36	0.21	4	71.347				10030
10624	-23	9636	8.2	K0	55 23.481	0.19	4	69.711	-23 46 12.53	0.16	4	69.711				10031
10625	-21	3195	7.8	F5	55 28.540	0.04	4	69.256	-21 45 11.55	0.13	4	69.256				10032
10626	-52	4055	7.6	K0	10 55 36.002	0.12	4	69.642	-52 24 49.69	0.11	4	69.642				10033
10627	-2	3259	8.5	K2	55 39.654	0.22	3	71.479	-3 13 00.15	0.15	3	71.479				10034
10628	-34	7109	8.8	A0	55 45.674	0.18	4	69.693	-35 17 47.34	0.17	4	69.693				10035
10629	-74	755	6.05	K2	55 50.080	0.09	6	68.999	-74 49 55.22	0.06	6	68.999	2875	15072	2577	32875
10629 SP					55 50.073	0.07	36	71.580	-74 49 55.07	0.16	34	71.580	2875	15072	2577	52875

10577 9.0m to 9.7m.
10590 SDS, 9.2m-9.8m, 1"8, 92°.

10591 SDS, 8.6m-9.1m, 0"1.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
10630	-55	4017	8.5	G5	10 55 56.179	0.20	4	69.681	-56 00 51.57	0.10	4	69.681				10036
10631	-36	6833	9.0	K0	55 57.494	0.13	4	70.137	-36 52 59.44	0.05	4	70.137				10037
10632*	-53	4262	8.1	K0	55 58.342	0.10	5	70.376	-54 03 48.88	0.02	4	70.636				10038
10633	-6	3274	8.8	K0	55 58.402	0.45	2	70.706	-6 47 13.66	0.07	2	70.706				10039
10634	-63	1767	9.1	F0	56 08.753	0.18	5	70.495	-64 07 13.96	0.05	5	70.495				10040
10635	+2	2373	8.0	K0	10 56 13.470	0.16	2	69.822	+1 59 51.99	0.23	2	69.822				10041
10636	-1	2465	8.3	K0	56 16.966	0.10	2	71.300	-1 58 04.77	0.09	2	71.300				10042
10637	-37	6947	7.55	K0	56 17.767	0.11	4	69.770	-37 56 13.30	0.19	4	69.770		15081		10043
10638	-3	3024	8.0	K5	56 21.107	0.10	2	71.586	-4 24 36.13	0.23	2	71.586				10044
10639	+2	2374	8.7	K0	56 25.326	0.23	3	72.057	+2 27 48.35	0.16	3	72.057				10045
10640	-18	3072	6.96	K0	10 56 29.218	0.10	2	69.808	-19 20 09.72	0.12	2	69.808		15085	2581	10046
10641	-74	757	8.8	F5	56 36.782	0.10	4	68.659	-75 19 59.19	0.13	4	68.659				19385
10641 SP					56 36.685	0.38	4	69.614	-75 19 59.42	0.56	4	69.614				19385
10642	-22	3049	7.7	F0	56 39.279	0.08	4	69.306	-22 59 10.70	0.11	4	69.306				10047
10643	+41	2147	5.14	G0	56 39.740	--	1	73.009	+40 41 52.74	--	1	73.009	1282	15087	2582	31282
10644	-60	2428	8.0	K2	10 56 44.407	0.23	4	69.360	-60 35 40.71	0.17	4	69.360				10048
10645	-28	8570	8.5	K5	56 46.313	0.05	4	70.637	-28 53 29.54	0.15	4	70.637				10049
10646	-16	3163	7.9	A2	56 48.092	0.06	2	70.668	-17 21 17.69	0.00	2	70.668		15092		10050
10647	-46	6615	8.6	K2	56 52.862	0.03	5	69.659	-47 06 27.21	0.05	4	69.721				1306
10648	-13	3265	8.2	K0	56 57.475	0.05	3	71.309	-13 54 11.64	0.14	2	71.334				10051
10649	-74	758	8.5	K2	10 56 57.782	0.08	4	70.069	-74 29 04.29	0.21	4	70.069				19386
10650	-20	3314	8.3	K2	56 58.995	0.10	4	70.285	-20 46 42.42	0.04	4	70.285				10052
10651	+5	2425	8.1	K5	56 59.538	0.19	2	71.680	+4 37 19.77	0.21	2	71.680				10053
10652	-15	3174	6.16	M0	57 02.413	0.07	2	71.580	-16 05 06.64	0.09	2	71.580		15101		10054
10653	+12	2284	6.36	F5	57 04.082	0.09	6	69.479	+11 58 25.50	0.17	6	69.479	2877	15102	2585	32877
10654	-26	8273	8.3	K0	10 57 06.881	0.15	3	71.067	-27 12 51.52	0.12	4	70.616				10055
10655	-39	6827	9.3	K5	57 07.783	0.15	4	70.161	-39 33 09.78	0.19	4	70.161				10056
10656	-41	6270	9.0	K2	57 09.379	0.08	4	70.558	-42 09 01.33	0.18	4	70.558				1307
10657	-6	3281	8.6	K2	57 13.266	0.01	2	70.684	-7 18 27.51	0.28	2	70.684				10057
10658	-17	3273	4.20	K0	57 19.463	0.02	100	71.009	-18 01 52.97	0.03	97	70.992	1283	15106	2586	81283
10659	-14	3237	8.3	K0	10 57 25.595	0.04	3	71.901	-15 09 40.90	0.04	2	71.784			2587	10058
10660	-16	3164	8.7	A0	57 26.306	0.27	2	71.777	-17 02 55.00	0.02	2	71.777				10059
10661	-30	8877	8.9	K2	57 27.440	0.12	4	70.220	-30 38 27.63	0.35	4	70.220				10060
10662	-44	6989	9.0	K0	57 32.974	0.05	4	70.254	-44 30 12.17	0.14	4	70.254				1308
10663	-49	5735	8.8	K2	57 34.209	0.06	4	70.720	-49 25 50.87	0.05	4	70.720				1309
10664	-61	2011	7.40	K0	10 57 37.368	0.08	4	70.642	-62 12 56.46	0.22	4	70.642		15115		10061
10665	-31	8692	8.9	G5	57 38.193	0.08	4	70.622	-32 03 34.20	0.18	4	70.622				10062
10666	-45	6585	9.1	K0	57 38.572	0.15	4	70.761	-45 59 23.42	0.15	4	70.761				1310
10667*	-11	2993	8.0	K0	57 47.570	0.13	2	71.786	-11 30 58.17	0.09	2	71.786				10063
10668	-18	3078	9.0	K7	57 48.686	0.04	2	71.839	-18 43 03.82	0.25	2	71.839				10064
10669	-41	6276	4.56	A2	10 57 51.320	0.05	35	71.386	-41 57 26.25	0.06	34	71.360	415	15118	2588	30415
10670	-8	3062	7.5	A2	57 51.640	0.16	3	71.920	-9 13 26.73	0.09	2	71.809				10065
10671	-80	506	8.7	K	57 52.092	0.04	4	69.665	-80 31 17.87	0.18	4	69.665				19387
10671 SP					57 52.021	0.32	4	69.943	-80 31 17.83	0.14	4	69.943				19387
10672	+4	2407	5.05	K0	57 58.724	0.09	5	71.402	+3 53 10.55	0.06	5	71.402	1284	15125	2589	31284
10673	+4	2408	8.0	A0	10 58 02.579	0.24	2	71.331	+4 00 29.62	0.23	2	71.331				10066
10674	-53	4284	8.2	K0	58 09.154	0.07	4	70.154	-54 17 57.05	0.16	4	70.154				10067
10675	-65	1584	8.2	G0	58 24.026	0.09	4	70.672	-66 17 18.38	0.09	4	70.672				19388
10676	-34	7144	8.4	F8	58 29.861	0.08	5	71.211	-35 17 28.58	0.14	5	71.211				10068
10677	-34	7145	8.4	K0	58 32.195	0.17	4	70.685	-34 41 30.63	0.07	4	70.685				10069
10678	-4	2996	8.7	A3	10 58 36.433	0.13	2	71.353	-5 25 17.69	0.09	2	71.353				10070
10679	-65	1587	7.2	K5	58 43.205	0.18	4	70.291	-65 45 41.00	0.08	4	70.291				19389
10680	-32	7833	8.9	K2	58 54.442	0.23	4	69.778	-33 16 09.16	0.19	4	69.778				10071
10681	-11	3002	8.3	K5	58 57.151	0.11	2	70.864	-12 28 41.08	0.31	2	70.864				10072
10682	-52	4117	8.6	G5	58 58.000	0.15	4	69.870	-53 16 59.94	0.16	4	69.870				10073
10683	-70	1276	8.7	K5	10 59 05.429	0.08	5	70.231	-71 11 21.07	0.16	5	70.642				19390
10684	-48	6096	8.6	M0	59 08.064	0.11	5	70.049	-49 04 36.23	0.09	4	70.207				1311
10685	-59	2942	8.1	K0	59 09.383	0.27	4	70.282	-59 44 26.93	0.11	4	70.282				10074
10686	-1	2471	4.97	M0	59 16.605	0.06	6	70.729	-2 12 54.81	0.09	6	70.729	2879	15151		32879
10687	-21	3215	8.4	A0	59 35.875	0.06	4	69.732	-21 52 55.57	0.03	4	69.732				10075
10688	+20	2547	4.42	A0	10 59 39.741	0.14	6	69.383	+20 26 55.04	0.13	6	69.383	2880	15162		32880
10689	-37	6993	7.84	K5	59 40.228	0.11	4	70.206	-37 33 51.39	0.11	4	70.206		15163		10076
10690	-83	386	6.26	A0	59 41.181	0.02	229	70.941	-84 19 30.02	0.03	216	70.887	1664	15164	2595	61664
10690 SP					59 41.216	0.02	189	70.990	-84 19 30.07	0.04	182	70.971	1664	15164	2595	71664
10691	+2	2378	8.2	A3	59 43.526	0.10	2	70.657	+2 27 31.42	0.02	2	70.657				10077
10692	-24	9479	8.6	G0	10 59 48.040	0.14	4	70.854	-24 27 15.74	0.15	4	70.854				10078
10693	-42	6674	8.2	K5	59 59.313	0.09	4	70.155	-42 32 05.96	0.09	4	70.155				1312
10694	+0	2726	8.5	F5	59 59.425	0.03	2	70.706	+0 10 31.84	0.06	2	70.706		15172		10079
10695	-9	3195	7.52	K5	11 00 00.517	0.14	2	70.657	-9 43 31.57	0.02	2	70.657		15173		10080
10696	-55	4077	8.3	A2	00 02.147	0.16	4	69.207	-56 08 11.68	0.12	4	69.207				10081
10697	-2	3270	7.13	G5	11 00 04.079	0.04	44	71.654	-3 14 35.49	0.03	44	71.654	1285	15176	2596	31285
10698	-35	6921	8.8	K0	00 04.325	0.11	4	70.219	-35 58 17.47	0.20	4	70.219				10082
10699	-43	6720	8.5	K0	00 05.451	0.10	4	70.231	-43 36 16.16	0.17	4	70.231				1313
10700	-14	3247	8.5	K5	00 10.032	0.17	3	71.876	-14 35 39.56	0.05	2	71.758				10083
10701	+2	2379	8.9	A5	00 11.732	0.00	2	71.747	+1 30 56.53	0.23	2	71.747				10084

10632 SDS, 8.8m-9.1m, 0"2, 4°.

10667 A 8014, 8.2m-10.9m, 1"1, 46°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
10702	-5	3189	7.7	K2	11	00	14.063	0.13	2	71.580	-6	07' 27.65	0.07	2	71.580				10085
10703	-40	6464	8.5	G5		00	15.800	0.11	4	69.730	-40	38 19.94	0.18	4	69.730				1314
10704	-1	2473	7.32	G5		00	24.993	0.15	3	71.883	-2	21 57.27	0.06	3	71.883		15180		10086
10705	-4	3001	8.6	K5		00	27.163	0.07	2	71.685	-4	41 32.79	0.15	2	71.685				10087
10706	-28	8615	7.8	K2		00	27.592	0.09	4	69.673	-28	27 20.03	0.17	4	69.673				10088
10707	-23	9693	7.2	K2	11	00	29.011	0.14	4	70.180	-23	43 05.05	0.28	4	70.180				10089
10708	-24	9487	6.80	A2		00	39.383	0.06	4	69.750	-25	18 20.38	0.13	4	69.750		15184		10090
10709	-66	1506	8.7	K5		00	41.954	0.02	4	69.658	-67	01 26.78	0.07	4	69.658				19391
10710	-29	8813	8.2	K5		00	44.153	0.20	3	69.914	-29	54 45.58	0.08	4	69.750				10091
10711	-81	481	9.0	A5		00	47.140	0.21	4	69.772	-82	01 25.03	0.10	4	69.772				19393
10711	SP				11	00	47.175	0.03	4	70.092	-82	01 24.86	0.44	4	70.092				19393
10712	-72	1090	8.5	K0		00	47.442	0.10	4	70.099	-73	11 29.98	0.14	4	70.099				19392
10713	-35	6935	8.9	K0		00	49.391	0.09	4	70.138	-35	33 05.40	0.04	4	70.138				10092
10714	-31	8726	6.52	M0		00	52.777	0.10	6	69.049	-31	41 27.85	0.10	6	69.049	2881	15192	2599	32881
10715	-0	2399	8.7	K2		00	57.534	0.23	2	70.707	-1	12 57.73	0.29	2	70.707				10093
10716	-50	5628	7.8	G5	11	00	59.514	0.05	4	70.121	-50	43 20.27	0.05	4	70.121				1315
10717	-67	1636	8.18	K2		01	03.806	0.09	5	70.342	-67	38 22.80	0.09	5	70.342		15198		19394
10718	-38	6904	9.1	K1		01	10.886	0.17	4	70.916	-38	45 11.75	0.07	4	70.916				10094
10719	-35	6938	8.7	K0		01	12.907	0.12	5	69.673	-36	23 37.40	0.15	4	69.737				10095
10720	-25	8421	8.5	K2		01	14.418	0.04	5	71.037	-25	39 47.08	0.22	4	70.773				10096
10721	-6	3300	7.9	K0	11	01	18.483	0.29	2	70.714	-7	25 04.75	0.05	2	70.714				10097
10722	-79	584	9.3	K0		01	21.935	0.14	4	69.683	-79	29 28.71	0.13	4	69.683				19395
10722	SP					01	21.800	0.13	3	70.413	-79	29 28.59	0.29	3	70.413				19395
10723	-8	3074	8.1	F2		01	25.988	0.23	2	70.736	-8	48 40.58	0.03	2	70.736				10098
10724	-18	3093	6.55	A5		01	26.460	0.13	2	71.609	-19	22 49.03	0.03	2	71.609		15209		10099
10725	+0	2730	8.5	F8	11	01	27.681	0.30	2	70.807	+0	14 19.71	0.07	2	70.807		15210		10100
10726	-30	8928	8.6	K5		01	32.051	0.13	4	70.623	-31	17 16.15	0.05	4	70.623				10101
10727	-51	5279	8.5	K0		01	33.651	0.13	4	69.751	-51	49 41.53	0.26	4	69.751				1316
10728	-21	3223	8.7	K0		01	42.749	0.10	4	69.837	-22	01 49.89	0.12	4	69.837				10102
10729*	-31	8735	9.0	K0		01	43.152	0.20	4	69.966	-32	19 07.66	0.08	4	69.966				10103
10730	-0	2401	6.79	A0	11	01	45.777	0.03	2	70.878	-1	00 30.02	0.16	2	70.878		15216	2601	10104
10731	+3	2452	9.0	F8		01	49.328	0.03	3	72.220	+3	26 00.90	0.08	2	72.274				10105
10732	-53	4317	6.57	K0		01	51.911	0.15	6	69.020	-53	55 40.72	0.07	6	69.020	2883	15220	2602	32883
10733	-4	3006	8.2	K5		01	53.024	0.04	2	71.741	-5	07 11.06	0.34	2	71.741				10106
10734	-18	3096	9.0	G0		01	59.662	0.14	2	70.852	-19	23 43.77	0.35	2	70.852				10107
10735	-10	3188	8.4	K7	11	02	04.706	0.05	2	71.654	-10	33 57.19	0.05	2	71.654				10108
10736	-39	6886	7.6	K5		02	05.854	0.14	4	69.718	-39	33 03.21	0.08	4	69.718				10109
10737	-30	8936	7.7	K2		02	08.836	0.08	4	71.386	-30	34 20.59	0.13	4	71.386				10110
10738	-1	2476	8.4	K0		02	11.333	0.07	2	71.677	-2	14 35.50	0.32	2	71.677		15229		10111
10739	-46	6714	9.1	F8		02	11.421	0.21	4	70.032	-47	18 27.74	0.03	4	70.032				1317
10740	-47	6466	5.94	A5	11	02	15.629	0.06	6	69.720	-47	24 34.04	0.07	6	69.720	2884	15230	2604	32884
10741	-15	3189	8.6	A0		02	16.120	0.27	2	71.679	-15	58 44.19	0.02	2	71.679				10112
10742	-16	3181	8.9	G5		02	18.149	0.19	2	70.811	-16	36 16.70	0.49	2	70.811				10113
10743	-80	522	8.21	G5		02	19.821	0.10	4	69.722	-81	21 08.49	0.15	4	69.722		15233		19396
10743	SP					02	19.940	0.13	3	70.331	-81	21 08.20	0.11	3	70.331		15233		19396
10744	-51	5295	8.7	G5	11	02	21.369	0.14	4	69.672	-52	11 05.43	0.11	4	69.672				10114
10745	-33	7478	8.8	F5		02	23.528	0.05	4	70.209	-33	37 52.00	0.09	4	70.209				10115
10746	-26	8331	8.5	K5		02	23.811	0.09	4	70.705	-26	34 06.28	0.11	4	70.705				10116
10747	-49	5812	9.0	K0		02	25.045	0.07	5	70.398	-50	02 45.08	0.14	5	70.398				1318
10748	-60	2499	7.4	K5		02	25.244	0.06	4	69.782	-61	13 05.50	0.07	4	69.782				10117
10749	+8	2455	4.66	F0	11	02	25.802	0.03	52	71.521	+7	36 22.96	0.05	51	71.509	418	15235	2605	30418
10750	-58	3014	7.8	G5		02	26.788	0.16	5	70.041	-58	25 27.65	0.13	3	69.865				10118
10751	-62	1868	8.03	K5		02	27.232	0.15	4	70.179	-62	41 31.56	0.03	4	70.179		15236		10119
10752	-71	1197	7.9	K0		02	29.132	0.08	4	69.651	-71	37 18.86	0.18	4	69.651				19397
10753	-35	6954	5.53	A0		02	32.139	0.09	6	70.364	-35	32 04.89	0.12	6	70.364	2885	15238	2606	32885
10754	-64	1621	7.9	K5	11	02	40.960	0.04	4	70.116	-65	18 09.29	0.12	4	70.116				19398
10755	-34	7191	8.9	K5		02	45.530	0.13	4	70.654	-34	59 48.54	0.15	4	70.654				10120
10756	-29	8840	7.40	K2		02	48.092	0.08	4	69.756	-30	09 56.02	0.10	4	69.756		15242		10121
10757	-70	1296	9.0	G5		02	53.338	0.07	5	69.969	-71	31 06.17	0.09	4	70.185				19399
10758*	-26	8338	5.06	F5		02	54.840	0.03	48	71.094	-27	01 24.22	0.04	45	71.084	419	15248	2608	30419
10759	-10	3190	6.14	A3	11	03	03.312	0.02	91	70.688	-10	49 05.20	0.03	87	70.608	1286	15256	2610	81286
10760	-48	6162	9.0	G5		03	09.603	0.06	4	70.217	-48	55 08.72	0.08	4	70.217				1319
10761	-64	1626	9.1	K2		03	15.384	0.12	4	69.700	-64	47 02.02	0.12	4	69.700				19400
10762	+1	2519	7.4	M0		03	28.135	0.22	2	71.748	+1	28 51.84	0.28	2	71.748				10122
10763	-11	3022	8.2	K0		03	28.526	0.15	2	72.179	-11	53 40.87	0.01	2	72.179				10123
10764	-37	7027	8.0	K5	11	03	30.731	0.06	5	69.694	-37	39 31.37	0.15	4	69.765				10124
10765	-6	3305	7.7	K0		03	33.970	0.19	2	71.743	-6	44 15.97	0.27	2	71.743		2611		10125
10766	-47	6497	8.5	G5		03	55.639	0.07	4	69.746	-47	24 45.88	0.19	4	69.746				1320
10767	-12	3346	8.1	K0		04	00.235	0.03	2	70.878	-13	08 48.65	0.06	2	70.878		15268	2613	10126
10768	+2	2386	8.1	K0		04	00.941	0.09	2	71.602	+2	09 03.31	0.04	2	71.602		15271		10127
10769	+18	2452	6.59	K5	11	04	05.127	0.13	6	70.260	+18	00 28.82	0.14	6	70.260	2887	15273	2614	32887
10770	-13	3300	8.0	F5		04	05.138	0.27	2	71.744	-14	28 24.18	0.06	2	71.744				10128
10771	-19	3176	8.2	K0		04	08.612	0.14	4	69.978	-20	25 39.41	0.30	4	69.978				10129
10772	+3	2458	8.8	A2		04	14.848	0.10	2	70.810	+3	07 54.45	0.02	2	70.810				

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
10774	+ 2	2387	5.66	G5	11 04 20.603	0.06	28	71.551	+ 2 13 36.44	0.04	27	71.561	1287	15282	2616	31287
10775	- 4	3014	8.8	G5	04 24.152	0.03	2	71.718	- 5 19 03.20	0.16	2	71.718				10131
10776	-42	6734	9.1	G5	04 25.219	0.07	4	69.957	-43 20 36.36	0.06	4	69.957				1321
10777	-29	8865	6.61	K0	04 27.846	0.12	4	69.644	-30 17 01.63	0.09	4	69.644		15286		10132
10778	-46	6753	8.40	K0	04 31.485	0.08	4	69.733	-47 05 12.17	0.03	4	69.733		15290		1322
10779	-41	6337	8.5	K0	11 04 33.381	0.16	4	69.744	-41 55 57.84	0.05	4	69.744				1323
10780	- 7	3174	8.7	K0	04 45.804	0.21	2	70.721	- 8 19 48.15	0.11	2	70.721				10133
10781	-14	3263	8.3	G0	04 52.064	0.14	3	70.812	-15 05 26.81	0.09	2	71.575		15299		10134
10782	-17	3304	8.6	K5	04 56.155	0.11	2	71.681	-17 31 48.80	0.26	2	71.681				10135
10783	-45	6697	8.9	K0	04 56.206	0.06	4	70.462	-46 01 27.11	0.15	4	70.462				1324
10784	-70	1305	5.80	B3	11 05 00.973	0.02	118	71.104	-70 36 25.92	0.03	114	71.075	1288	15305	2620	31288
10785	-27	7873	7.49	K0	05 02.429	0.12	4	69.252	-28 13 13.88	0.09	4	69.252		15306		10136
10786	-56	4221	8.3	K0	05 05.573	0.16	5	70.680	-56 59 05.69	0.07	5	70.680				10137
10787	-61	2071	8.3	K5	05 18.372	0.16	4	70.248	-61 42 38.99	0.19	4	70.248				10138
10788	-23	9752	8.3	K0	05 32.184	0.12	4	69.305	-23 35 14.89	0.09	4	69.305				10139
10789	-58	3163	7.5	K0	11 05 35.388	0.19	3	70.641	-59 24 01.07	0.14	3	70.641				10140
10790	-40	6533	8.0	K2	05 37.809	0.15	4	69.650	-40 39 54.74	0.12	4	69.650				1325
10791	-49	5850	8.2	K0	05 37.967	0.18	5	70.821	-50 16 06.83	0.12	5	70.821				1326
10792	+ 4	2423	7.8	A2	05 39.007	0.37	2	69.665	+ 3 48 15.84	0.11	2	69.665				10141
10793	-20	3352	7.3	K0	05 42.537	0.08	4	68.786	-21 14 51.74	0.11	4	68.786				10142
10794	-39	6922	8.8	K1	11 05 44.815	0.11	4	69.728	-39 24 59.13	0.06	4	69.728				10143
10795	+ 5	2450	8.1	F0	05 45.244	0.01	2	70.752	+ 4 43 46.53	0.28	2	70.752				10144
10796	- 3	3053	8.2	K5	05 45.497	0.16	2	71.562	- 3 37 32.59	0.05	2	71.562				10145
10797	-15	3206	8.5	F5	05 47.919	0.14	3	71.340	-15 41 25.30	0.24	2	71.379				10146
10798	- 1	2489	8.4	K2	05 56.186	0.14	2	70.747	- 1 47 49.23	0.01	2	70.747				10147
10799	+ 0	2750	8.2	K2	11 06 01.896	0.07	2	71.672	- 0 17 30.93	0.33	2	71.672				10148
10800	-33	7518	8.1	K0	06 03.557	0.08	4	69.693	-33 29 17.06	0.32	4	69.693				10149
10801	-14	3266	8.6	G5	06 05.051	0.00	2	71.612	-15 17 24.31	0.16	2	71.612				10150
10802	+25	2344	5.63	A2	06 08.313	0.06	6	69.374	+24 55 46.25	0.12	6	69.374	2889	15319	2621	32889
10803	-68	1434	9.1	K2	06 08.628	0.08	5	70.438	-69 15 06.03	0.13	4	70.714				19402
10804	-21	3242	8.3	K2	11 06 08.884	0.14	4	68.746	-21 53 21.52	0.08	4	68.746				10151
10805	- 1	2490	8.6	K2	06 20.420	0.03	2	70.856	- 2 26 48.00	0.12	2	70.856				10152
10806	-42	6759	9.1	K0	06 21.761	0.14	4	69.677	-42 27 05.33	0.04	4	69.677				1327
10807	-34	7231	8.9	K0	06 22.122	0.14	4	69.686	-34 36 38.19	0.18	4	69.686				10153
10808	+ 2	2391	9.1	G0	06 26.673	0.25	3	72.178	+ 1 52 02.54	0.18	3	72.178				10154
10809	-58	3189	4.02	F8p	11 06 26.740	0.03	81	71.199	-58 42 14.01	0.04	80	71.198	1289	15329	2623	31289
10810	-18	3110	6.72	A0	06 28.494	0.04	2	71.674	-19 08 42.97	0.18	2	71.674		15330		10155
10811	-61	2075	5.42	A0p	06 28.558	0.05	6	69.319	-61 40 33.67	0.17	6	69.319	2891	15331	2624	32891
10812	-54	4338	7.6	K0	06 31.379	0.14	4	70.235	-55 04 59.60	0.14	4	70.235				10156
10813	-19	3185	8.3	A0	06 37.136	0.21	3	69.099	-20 14 32.32	0.07	4	69.140				10157
10814	- 0	2409	6.75	A2	11 06 40.337	0.09	2	71.665	- 1 03 42.95	0.08	2	71.665		15336		10158
10815	-51	5371	8.8	K0	06 40.735	0.10	5	70.413	-52 01 58.29	0.08	5	70.413				1328
10816*	-18	3113	8.6	K0	06 41.787	0.04	2	71.575	-18 35 04.70	0.41	2	71.575				10159
10817	- 9	3221	8.0	F5	06 59.853	0.18	2	70.694	-10 07 33.30	0.13	2	70.694				10160
10818	+ 3	2466	7.9	G5	07 06.322	0.05	2	71.576	+ 2 43 38.35	0.10	2	71.576		15343		10161
10819	-10	3209	8.5	K5	11 07 14.655	0.13	3	70.812	-11 02 50.47	0.19	2	71.575				10162
10820	- 5	3216	8.3	F0	07 15.341	0.11	2	71.631	- 5 32 25.56	0.30	2	71.631				10163
10821	+ 4	2426	8.5	K0	07 19.923	0.04	2	71.868	+ 3 58 54.84	0.06	2	71.868				10165
10822	-31	8813	8.2	K0	07 19.948	0.08	4	69.675	-32 03 18.05	0.16	4	69.675				10164
10823	-24	9567	7.32	K0	07 38.326	0.11	4	69.143	-25 20 09.08	0.12	4	69.143		15355		10166
10824	-52	4282	8.1	G5	11 07 39.883	0.03	4	69.079	-53 23 45.27	0.25	4	69.079				10167
10825	-26	8394	7.8	K5	07 41.797	0.09	4	70.425	-27 15 37.51	0.04	4	70.425				10168
10826	- 6	3317	6.79	G0	07 41.936	0.39	2	70.703	- 7 06 59.49	0.03	2	70.703		15356		10169
10827	-37	7065	8.8	K0	07 42.566	0.19	4	69.671	-37 49 59.64	0.20	4	69.671				10170
10828	-83	396	7.89	K0	07 43.660	0.08	4	69.615	-84 09 56.86	0.15	4	69.615		15357		19403
10828 SP					11 07 43.708	0.16	4	71.090	-84 09 56.54	0.11	4	71.090		15357		19403
10829	-71	1202	8.4	K0	07 46.371	0.15	4	69.268	-72 01 19.29	0.17	4	69.268				19404
10830	- 5	3218	8.2	K0	07 46.420	0.11	2	70.545	- 6 25 01.81	0.14	2	70.545				10171
10831	-77	651	8.5	F5	07 51.898	0.06	4	69.168	-77 31 21.80	0.11	4	69.168				19405
10831 SP					07 51.943	0.32	4	70.493	-77 31 22.16	0.16	4	70.493				19405
10832	-44	7116	8.48	K0	11 07 54.831	0.04	4	69.711	-45 15 50.26	0.16	4	69.711		15358		1329
10833	-35	7019	7.35	M0	07 58.390	0.10	4	69.700	-35 49 25.36	0.09	4	69.700		15360		10172
10834	-37	7073	8.2	K2	08 07.263	0.06	5	69.707	-38 09 07.74	0.16	4	69.780				10173
10835	-29	8898	8.7	F2	08 09.125	0.05	4	69.763	-30 11 00.24	0.11	4	69.763				10174
10836	-75	714	8.9	A0	08 17.677	0.06	4	69.747	-76 20 29.76	0.13	4	69.747				19406
10836 SP					11 08 17.604	0.21	3	70.120	-76 20 29.75	0.30	3	70.120				19406
10837	-12	3362	7.6	K0	08 19.250	0.02	2	69.818	-12 50 33.18	0.13	2	69.818				10175
10838	- 5	3222	8.7	K0	08 24.733	0.00	2	70.756	- 5 52 47.33	0.04	2	70.756				10176
10839	-60	2593	8.5	K0	08 29.321	0.11	4	70.588	-60 38 51.66	0.03	4	70.588				10177
10840	-36	7015	8.4	K5	08 30.043	0.02	4	70.208	-36 27 07.50	0.09	4	70.208				10178
10841	-30	9005	9.0	K0	11 08 30.177	0.11	4	69.809	-31 22 27.45	0.08	4	69.809				10179
10842	- 4	3024	7.7	A2	08 43.806	0.00	2	71.665	- 5 11 53.83	0.06	2	71.665				10180
10843	-54	4373	8.6	G5	08 47.134	0.21	5	70.714	-55 00 38.03	0.17	5	70.714				10181
10844	-85	273	9.0	K0	08 48.906	0.17	5	70.773	-85 38 46.31	0.09	5	70.773				19407
10844 SP					08 48.638	0.14	3	69.703	-85 38 46.61	0.39	3	69.703				19407

10816 8.9m-11.5m, 0°7. 264°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
10845	-7	3188	8.7	K2	11 08 56.577	0.04	2	71.689	-8 23 40.30	0.27	2	71.689				10182
10846	-49	5910	8.8	K0	08 57.367	0.14	4	70.302	-49 53 18.38	0.04	4	70.302				1330
10847	-53	4394	8.00	F8	09 06.748	0.13	4	69.753	-54 17 06.61	0.19	4	69.753		15381		10183
10848	-51	5421	8.2	G5	09 09.848	0.04	5	70.790	-52 23 35.50	0.09	5	70.790				10184
10849	-48	6250	8.3	M0	09 10.032	0.15	4	69.849	-48 34 46.89	0.15	4	69.849				1331
10850	-22	3095	4.52	A2	11 09 11.720	0.02	141	70.982	-22 33 11.29	0.02	139	70.950	421	15385	2631	80421
10851	-75	715	8.7	G5	09 16.821	0.06	4	70.158	-75 50 20.63	0.14	4	70.158				19408
10851	SP				09 16.733	0.25	4	70.397	-75 50 20.93	0.47	4	70.397				19408
10852	-59	3160	8.0	K2	09 29.227	0.08	4	70.175	-59 26 44.34	0.15	4	70.175				10185
10853*	-73	810	7.6	F8	09 33.169	0.19	4	70.237	-74 11 29.01	0.00	3	69.891				19409
10854	-13	3320	8.2	K2	11 09 34.689	0.05	3	71.222	-13 51 03.74	0.05	2	70.788				10186
10855	+0	2758	8.2	A5	09 36.806	0.15	2	70.836	-0 08 14.66	0.32	2	70.836				10187
10856	-8	3101	7.3	F2	09 40.556	0.11	2	69.804	-9 12 46.17	0.32	2	69.804				10188
10857	-31	8847	6.46	M0	09 49.952	0.03	75	70.863	-32 09 42.50	0.03	71	70.803	1290	15398	2632	31290
10858	-47	6598	8.5	K0	09 52.658	0.15	4	70.237	-47 51 31.27	0.15	4	70.237				1332
10859	-29	8911	7.21	K5	11 09 53.295	0.13	4	71.163	-29 30 37.47	0.03	4	71.163		15401		10189
10860	-9	3237	8.6	F0	09 57.094	0.03	3	71.920	-9 42 25.69	0.03	2	71.811				10190
10861	-50	5786	8.2	K0	10 04.247	0.09	5	69.699	-51 16 03.20	0.04	4	69.790				1333
10862	-34	7286	7.76	A2	10 12.495	0.20	4	70.002	-35 07 49.68	0.09	4	70.002		15408		18448
10863	-48	6263	5.67	A2	10 15.756	0.04	47	70.677	-48 49 44.73	0.05	47	70.677	1291	15411	2634	31291
10864	-23	9801	8.8	K0	11 10 19.918	0.07	5	70.496	-23 32 53.85	0.08	5	70.496				10191
10865	-36	7038	9.2	K0	10 20.483	0.13	5	70.003	-37 06 34.39	0.29	4	70.150				10192
10866	-3	3067	8.5	K0	10 23.726	0.05	2	70.817	-3 33 35.88	0.06	2	70.817				10193
10867	-6	3328	8.7	K5	10 29.594	0.11	3	71.932	-6 59 16.88	0.03	2	71.829				10194
10868	-16	3206	8.3	K2	10 37.221	0.01	2	70.692	-16 59 02.20	0.19	2	70.692				10195
10869	-63	1860	5.52	B8	11 10 40.361	0.11	6	70.745	-63 53 51.25	0.13	6	70.745	2893	15421	2635	32893
10870	-17	3326	8.1	G0	10 42.014	0.07	2	70.791	-17 53 29.30	0.17	2	70.791				10196
10871	-25	8531	7.16	A2	10 45.658	0.08	4	69.725	-26 11 34.10	0.18	4	69.725		15424		10197
10872	-13	3324	8.9	A0	10 47.308	0.04	2	71.665	-13 31 51.18	-	1	72.053				10198
10873	-21	3264	8.0	M1	10 52.070	0.09	4	70.639	-21 45 53.21	0.08	4	70.639				10199
10874	-4	3030	8.2	K5	11 10 52.479	0.26	2	69.818	-5 10 28.31	0.10	2	69.818				10200
10875	-45	6783	9.3	K0	10 53.908	0.07	4	70.162	-46 12 34.03	0.13	4	70.162				1334
10876	-43	6872	5.84	K5	10 54.442	0.05	5	70.942	-44 05 59.49	0.16	5	70.942	2894	15426		32894
10877	-33	7572	8.1	K0	10 59.018	0.19	4	70.222	-33 40 38.63	0.09	4	70.222				10201
10878	-62	1921	9.1	A2	10 59.881	0.02	4	69.169	-63 12 15.43	0.07	4	69.169				10202
10879	-39	6979	9.1	K0	11 11 04.160	0.06	4	70.259	-39 39 10.59	0.12	4	70.259				10203
10880	-22	3098	7.28	A2	11 13.192	0.18	4	69.711	-22 43 34.62	0.09	4	69.711		15431	2636	10204
10881	-14	3288	8.1	K2	11 14.705	0.27	2	70.750	-14 43 05.26	0.16	2	70.750				10205
10882	-66	1552	7.8	A2	11 15.415	0.08	4	70.153	-66 34 38.51	0.09	4	70.153				19410
10883	+4	2439	9.0	F5	11 15.622	0.08	2	70.776	+3 41 49.13	0.34	2	70.776				10206
10884	-26	8430	8.4	K2	11 16.672	0.13	3	69.878	-26 34 56.37	0.28	4	69.724				10207
10885	+8	2476	5.90	K0	11 26.022	0.07	6	71.255	+8 20 02.42	0.13	6	71.255	2895	15437		32895
10886	+21	2298	2.58	A3	11 27.306	0.06	15	71.710	+20 47 49.55	0.09	15	71.710	422	15438	2637	30422
10887	-51	5472	8.08	K0	11 32.079	0.17	5	70.553	-51 31 45.19	0.17	5	70.553				1335
10888	-32	7950	8.6	K5	11 34.907	0.06	4	70.121	-32 30 42.58	0.02	4	70.121				10208
10889	+16	2234	3.41	A0	11 36.972	0.05	17	70.906	+15 42 09.67	0.08	17	70.906	423	15441	2638	30423
10890	-43	6879	9.0	A3	11 37.296	0.07	4	70.247	-44 17 40.88	0.10	4	70.247				1336
10891	-7	3197	7.4	M0	11 41.099	0.48	3	71.518	-8 03 19.23	0.26	3	71.518				10209
10892	-30	9042	8.3	K5	11 42.739	0.13	4	70.462	-31 06 01.59	0.04	4	70.462				10210
10893	+1	2539	8.3	K2	11 46.202	0.03	2	70.694	+1 09 33.62	0.11	2	70.694		15446		10211
10894	-55	4225	8.2	K0	11 49.196	0.18	4	69.139	-56 21 36.76	0.17	4	69.139				10212
10895	-33	7584	8.0	K5	11 50.123	0.17	4	69.678	-34 21 34.92	0.17	4	69.678				10213
10896	-34	7301	9.8	G2	11 50.415	0.09	4	70.194	-35 22 38.02	0.17	4	70.194				10214
10897	-1	2499	8.5	F0	11 52.217	0.17	2	69.841	-2 09 19.39	0.07	2	69.841				10215
10898	-41	6428	8.0	K0	12 02.776	0.08	4	70.090	-41 43 37.76	0.13	4	70.090				1337
10899	-0	2422	6.76	K0	11 12 04.167	0.30	2	69.778	-0 59 53.02	0.43	2	69.778		15450		10216
10900	-57	4467	8.5	K0	12 12.395	0.06	5	69.761	-58 00 33.00	0.18	5	69.761				10217
10901	-19	3208	8.4	K0	12 13.678	0.08	4	69.189	-20 22 59.22	0.16	4	69.189				10218
10902	-35	7082	8.7	K2	12 18.070	0.15	4	69.692	-35 50 25.21	0.12	4	69.692				10219
10903	-27	7952	8.4	K2	12 19.447	0.11	4	69.730	-28 02 05.70	0.04	4	69.730				10220
10904	-22	3101	8.4	G0	11 12 21.328	0.08	4	69.197	-23 22 26.90	0.20	4	69.197				10221
10905	-68	1452	8.4	K5	12 27.207	0.13	4	68.675	-69 15 30.18	0.13	4	68.675				19411
10906	-43	6897	8.4	K2	12 29.876	0.11	4	69.741	-43 55 24.91	0.05	4	69.741				1338
10907	-0	2423	8.8	K5	12 30.692	0.04	2	70.703	-0 42 00.83	0.23	2	70.703				10222
10908	+23	2322	4.87	M0	12 32.790	0.06	6	69.062	+23 22 05.58	0.10	6	69.062	2897	15460	2642	32897
10909	-11	3060	8.7	K2	11 12 33.319	0.16	2	70.664	-12 01 15.81	0.15	2	70.664				10223
10910	-30	9056	8.7	K5	12 37.266	0.13	4	68.749	-30 45 58.49	0.10	4	68.749				10224
10911	+2	2403	8.5	K0	12 43.589	0.12	2	70.743	+2 20 14.10	0.04	2	70.743		15467		10225
10912	-36	7070	9.0	K0	12 45.862	0.10	4	69.735	-36 29 34.95	0.17	4	69.735				10226
10913	-18	3141	6.78	A0	12 48.660	0.06	6	68.713	-19 21 53.16	0.12	6	68.713	2898	15469	2643	32898
10914	-4	3040	8.5	K2	11 12 50.566	0.26	2	70.558	-4 39 39.39	0.01	2	70.558				10227
10915f	-40	6603	8.8	G5	12 51.056	0.05	5	69.679	-40 27 35.36	0.19	4	69.746				1339
10916	-10	3227	7.2	M2	12 52.496	0.05	2	70.638	-11 18 54.53	0.06	2	70.638				10228
10917	-11	3063	6.66	M0	13 08.935	0.07	3	71.272	-12 19 10.67	0.07	2	71.278		15480		10229
10918	-37	7126	7.50	K0	13 10.709	0.11	4	69.729	-37 59 07.32	0.16	4	69.729		15482		10230

10853 SDS, 8.1m-8.8m, 0°5, 80°.

10915 9.9m, 2°0, 32°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
10919	-15	3227	8.2	A3	11	13	11.120	0.14	2	70.852	-16 04 45.88	0.21	2	70.852		15483			10231
10920	-56	4351	7.9	K0			22.730	0.08	4	69.106	-57 22 40.14	0.19	4	69.106					10232
10921	-9	3247	7.4	K2			24.403	0.02	2	69.815	-10 20 35.05	0.09	2	69.815					10233
10922	-87	176	8.4	K0			24.897	0.08	4	69.141	-88 04 41.47	0.16	4	69.141					19412
10922	SP						24.510	0.17	4	70.086	-88 04 41.50	0.36	4	70.086					19412
10923	-24	9633	8.6	F5	11	13	35.723	0.17	3	68.569	-25 02 29.27	0.10	4	68.742					10234
10924	-2	3312	7.28	B3			38.683	0.10	2	70.821	-3 11 56.44	--	1	70.364		15498	2645		10235
10925	-18	3143	8.4	K0			40.318	0.11	4	71.325	-19 19 28.33	0.32	4	71.325					10236
10926	-46	6897	7.43	K0			40.504	0.10	4	69.640	-47 01 56.78	0.08	4	69.640		15499			1340
10927	-6	3340	8.9	F8			47.395	0.21	2	70.684	-6 51 57.71	0.06	2	70.684					10237
10928	-65	1651	8.4	K5	11	13	54.828	0.16	4	69.161	-65 33 16.85	0.15	4	69.161					19413
10929	-2	3315	4.58	A5			06.949	0.02	135	71.472	-3 22 41.67	0.02	127	71.444		1292	15511	2648	31292
10930	-42	6853	9.0	K2			13.146	0.10	4	69.620	-43 08 45.46	0.11	4	69.620					1341
10931	-59	3289	8.6	G5			17.315	0.03	4	69.629	-60 17 42.40	0.20	4	69.629					10238
10932	-13	3334	7.7	K2			18.131	0.23	3	70.837	-14 14 06.22	0.18	3	70.837					10239
10933*	-54	4427	7.5	G5	11	14	20.395	0.13	4	69.233	-55 16 56.12	0.11	4	69.233					10240
10934	-26	8462	7.24	G5			24.857	0.09	4	68.745	-26 57 58.42	0.12	4	68.745			2649		10241
10935	-40	6616	8.8	K5			25.383	0.10	4	69.602	-40 53 39.06	0.13	4	69.602					1342
10936	-6	3344	6.03	F0			25.999	0.06	4	70.245	-6 51 41.80	0.03	4	70.245		2900	15514	2650	10242
10937	-37	7142	6.85	K0			29.525	0.10	6	69.345	-38 07 32.63	0.10	6	69.345		2901	15515		32901
10938	-25	8568	8.5	A3	11	14	35.312	0.06	4	69.169	-25 51 28.12	0.06	4	69.169					10243
10939	+2	2409	5.44	K5			43.063	0.06	6	69.711	+2 17 05.96	0.06	6	69.711		2902	15520	2651	32902
10940	-8	3124	8.6	G5			46.789	0.04	2	69.762	-8 39 19.46	0.06	2	69.762					10244
10941	-80	538	8.7	K0			50.310	0.08	4	69.146	-81 17 50.67	0.12	4	69.146					19414
10941	SP						50.234	0.19	4	70.390	-81 17 50.61	0.13	4	70.390					19414
10942	-39	7017	9.0	K2	11	14	54.433	0.26	4	69.626	-39 49 42.29	0.10	4	69.626					10245
10943	-78	633	8.9	M2			14.155	0.11	4	69.180	-78 59 28.85	0.24	4	69.180					19415
10943	SP						14.040	0.69	2	70.109	-78 59 28.88	0.56	2	70.109					19415
10944	-67	1703	6.09	M0			16.054	0.09	7	69.494	-67 33 00.08	0.09	7	69.494		2903	15532		32903
10945	-60	2786	7.8	K0			26.229	0.07	4	68.659	-61 21 42.57	0.11	4	68.659					10246
10946	-44	7196	7.2	G5	11	15	30.369	0.19	4	69.625	-45 13 56.06	0.07	4	69.625					1343
10947	-51	5544	9.5	K0			31.313	0.20	4	69.614	-51 40 10.19	0.13	4	69.614					1344
10948	-16	3223	8.8	M0			38.410	0.21	2	70.627	-17 18 10.22	0.07	2	70.627					10247
10949	-70	1356	8.3	K5			45.557	0.11	5	70.154	-70 42 14.50	0.26	5	70.154					19416
10950	-4	3049	7.34	K0			47.771	0.13	2	70.642	-4 47 33.11	0.04	2	70.642		15546			10248
10951	-63	1876	7.9	A2	11	15	50.000	0.12	5	70.405	-63 46 08.67	0.13	5	70.405					10249
10952	-5	3250	8.3	K0			52.439	0.16	2	69.815	-5 37 21.46	0.07	2	69.815					10250
10953	-62	1963	7.53	K0			59.821	0.07	4	70.138	-62 42 06.52	0.10	4	70.138		15548			10251
10954	-67	1706	8.8	A0			01.080	0.13	4	70.134	-68 09 42.32	0.08	4	70.134					19417
10955	-17	3351	9.2	F8			23.879	0.21	2	70.646	-18 05 15.50	0.09	2	70.646					10252
10956	-32	8014	9.1	K0	11	16	31.987	0.13	5	70.327	-33 23 44.17	0.22	5	70.327					10253
10957	+2	2412	9.0	K0			32.175	0.07	2	69.841	+1 58 32.11	0.32	2	69.841					10254
10958	-24	9664	8.5	F0			32.880	0.06	4	69.183	-24 57 09.21	0.15	4	69.183					10255
10959	-19	3229	8.7	F0			37.760	0.16	4	69.258	-20 25 52.13	0.18	4	69.258					10256
10960	-26	8483	8.6	K0			38.273	0.10	4	69.952	-26 37 24.88	0.06	4	69.952					10257
10961	+1	2549	7.6	K0	11	16	41.715	0.02	2	70.664	+0 59 49.49	0.08	2	70.664					10258
10962	-15	3241	8.6	M1			42.812	0.02	2	70.691	-15 58 19.21	0.04	2	70.691					10259
10963	-13	3345	3.82	K0			50.110	0.03	81	71.512	-14 30 23.24	0.03	79	71.518		426	15567	2656	30426
10964*	-6	3355	8.5	A3			50.143	0.01	2	70.828	-7 17 59.35	0.19	2	70.828					10260
10965	-37	7169	7.9	K0			51.706	0.18	4	69.671	-37 27 02.77	0.13	4	69.671					10261
10966	+0	2769	8.5	F8	11	16	59.035	0.02	2	69.803	+0 05 12.47	0.30	2	69.803					10262
10967	-27	8004	7.52	K0			59.197	0.04	4	69.736	-28 12 06.49	0.15	4	69.736		15571			10263
10968	-44	7220	8.0	M1			59.501	0.10	4	69.699	-44 49 10.36	0.15	4	69.699					1345
10969	-31	8922	8.0	F2			59.511	0.11	4	69.731	-32 13 59.51	0.06	4	69.731					10264
10970	-78	638	6.29	A3			06.318	0.15	6	68.706	-79 23 41.00	0.27	6	68.706		2904	15572		32904
10970	SP				11	17	06.389	0.08	6	70.268	-79 23 40.52	0.30	6	70.268		2904	15572		52904
10971	-10	3243	8.7	F2			09.545	0.07	2	70.658	-11 29 27.33	0.24	2	70.658					10265
10972	+4	2449	8.3	F8			09.983	0.12	2	70.884	+3 53 41.88	0.16	2	70.884					10266
10973	-21	3285	8.4	K0			11.370	0.02	4	70.196	-21 57 06.41	0.04	4	70.196					10267
10974	-52	4457	8.8	K0			13.689	0.08	4	69.627	-52 28 23.77	0.11	4	69.627					10268
10975	-67	1714	8.4	K0	11	17	23.763	0.07	4	69.731	-68 00 04.96	0.16	4	69.731					19418
10976	-54	4467	8.1	K2			24.766	0.26	4	70.257	-54 28 09.86	0.14	4	70.257					10269
10977	-72	1120	8.5	K5			26.888	0.12	4	69.712	-72 52 50.62	0.36	4	69.712					19419
10978	-29	9009	8.0	K2			29.970	0.08	3	70.505	-30 10 21.04	0.10	4	70.194					10270
10979	-50	5903	8.8	K0			35.484	0.22	4	70.195	-50 35 17.66	0.11	4	70.195					1346
10980	-34	7376	9.1	K5	11	17	37.748	0.12	4	69.782	-34 58 57.48	0.01	4	69.782					10271
10981	-8	3138	8.5	K2			40.756	0.13	2	70.687	-8 35 25.67	0.00	2	70.687					10272
10982	-41	6488	9.0	F0			40.883	0.10	4	69.825	-41 56 11.57	0.09	4	69.825					1347
10983	-18	3154	7.5	G0			41.901	0.10	3	71.559	-19 18 12.42	0.11	3	71.559					10273
10984	+1	2552	8.4	G5			41.913	0.07	3	71.918	+0 32 53.31	0.02	2	71.820					10274
10985	-13	3350	7.7	K0	11	17	42.036	0.10	2	71.739	-13 36 38.54	0.20	2	71.739					10275
10986	-37	7178	9.0	K0			44.422	0.19	4	70.054	-37 58 47.37	0.11	4	70.054					10276
10987	-22	3115	8.0	K2			50.436	0.13	5	70.646	-23 27 04.44	0.14	4	70.497					10277
10988	-1	2510	8.6	F5			50.694	0.07	2	71.765	-1 31 23.69	0.02	2	71.765					10278
10989	-64	1652	7.7	M1			58.138	0.09	5	70.814	-64 58 40.93	0.16	5	70.814					19420

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
10990	-2	3325	8.5	A2	11 17 58.884	0.08	3	71.932	-2 37 26.92	0.19	3	71.932				10279
10991	-52	4473	7.6	K0	17 59.780	0.17	4	70.119	-53 22 05.00	0.15	3	69.733				10280
10992	-11	3078	8.9	K2	18 01.354	0.04	2	71.808	-12 24 01.58	0.14	2	71.808				10281
10993	-8	3141	8.6	A0	18 02.126	0.09	3	71.928	-9 25 01.17	0.30	2	71.846				10282
10994	-46	6977	8.5	K0	18 08.450	0.08	4	70.203	-47 05 04.79	0.14	4	70.203				1348
10995	-35	7143	8.4	K5	11 18 09.058	0.21	4	70.582	-35 42 33.95	0.07	4	70.582				10283
10996	+3	2488	8.3	K0	18 13.941	0.22	2	70.894	+3 08 10.55	0.06	2	70.894		15596		10284
10997	+6	2437	4.13	A0	18 33.363	0.02	103	71.076	+6 18 12.63	0.03	101	71.064	427	15600	2659	80427
10998	-2	3328	8.7	K2	18 35.477	0.01	2	69.766	-3 29 18.25	0.17	2	69.766				10285
10999*	-53	4498	4.26	B5	18 43.017	0.03	108	70.945	-54 13 00.64	0.03	102	70.890	428	15601	2660	30428
11000	-3	3098	8.1	A2	11 18 43.489	0.18	2	70.840	-4 05 31.72	0.10	2	70.840			2661	10286
11001	-29	9030	8.6	K0	18 49.778	0.08	4	69.210	-29 42 26.27	0.15	4	69.210				10287
11002	-1	2512	8.9	K5	18 51.969	0.05	2	70.758	-1 39 34.52	0.22	2	70.758				10288
11003	+4	2452	8.5	K5	18 54.718	0.01	2	69.814	+4 12 41.39	0.62	2	69.814		15605		10289
11004	-37	7188	8.1	K5	19 02.502	0.07	4	69.690	-38 02 04.64	0.11	4	69.690				10290
11005	-48	6399	8.5	K0	11 19 04.897	0.06	4	70.148	-49 01 46.32	0.08	4	70.148				1349
11006	-30	9136	8.2	K0	19 05.067	0.10	4	69.140	-31 02 13.81	0.10	4	69.140				10291
11007	-58	3510	8.2	K0	19 10.204	0.24	4	69.749	-58 58 44.33	0.13	4	69.749				10292
11008	-73	835	8.9	K5	19 18.175	0.21	6	70.698	-73 29 16.37	0.28	5	70.971				19421
11009	-53	4501	8.5	F0	19 22.666	0.11	5	70.262	-54 05 45.89	0.18	5	70.262				10293
11010	+0	2777	8.4	K5	11 19 22.723	0.13	2	69.800	-0 09 17.25	0.33	2	69.800				10294
11011	-47	6769	8.0	K0	19 24.165	0.20	4	70.029	-48 13 16.43	0.18	4	70.029				1350
11012	-49	6092	8.9	G5	19 24.322	0.05	5	70.672	-49 37 40.02	0.20	4	70.525				1351
11013	-12	3409	8.2	K0	19 27.465	0.12	2	69.804	-12 56 11.03	0.11	2	69.804				10295
11014	-83	409	8.4	K0	19 27.708	0.03	4	69.111	-83 30 23.70	0.10	4	69.111				19422
11014 SP					11 19 27.865	0.10	4	69.664	-83 30 23.29	0.08	4	69.664				19422
11015	-71	1242	8.1	F0	19 28.414	0.07	4	70.200	-71 30 41.82	0.10	4	70.200				19423
11016	-1	2516	8.6	K2	19 34.755	0.09	2	70.815	-2 06 52.53	0.06	2	70.815				10296
11017	-74	803	9.5	G0	19 37.632	0.13	4	69.200	-75 10 15.52	0.08	4	69.200				19424
11017 SP					19 37.526	0.47	4	70.436	-75 10 14.83	0.56	4	70.436				19424
11018	-24	9710	7.8	K0	11 19 47.669	0.09	4	68.742	-24 55 14.37	0.12	4	68.742				10297
11019	-4	3058	8.7	K5	19 49.508	0.18	2	70.798	-4 52 23.70	0.12	2	70.798				10298
11020	-35	7155	7.9	F5	19 50.912	0.03	4	69.788	-36 12 41.56	0.11	4	69.788				10299
11021	-7	3223	8.3	K2	19 59.432	0.01	2	69.840	-7 47 59.45	0.17	2	69.840				10300
11022	-56	4441	8.21	K0	20 15.096	0.10	4	68.656	-56 30 22.05	0.09	4	68.656		15627		10301
11023	-42	6933	8.0	K5	11 20 20.902	0.10	4	69.752	-42 40 24.81	0.12	4	69.752				1352
11024	-19	3250	7.58	A2	20 27.530	0.04	4	69.290	-20 21 03.71	0.05	4	69.290		15632		10302
11025	-43	7013	8.0	K2	20 34.432	0.06	4	69.718	-43 44 47.55	0.21	4	69.718				1353
11026	-15	3256	8.1	F5	20 34.797	0.19	2	70.598	-16 19 49.25	0.24	2	70.598			2664	10303
11027	-13	3359	8.0	K2	20 36.819	0.20	2	70.660	-14 25 04.87	0.13	2	70.660				10304
11028	-34	7411	8.6	K5	11 20 43.818	0.10	4	69.716	-34 42 26.27	0.15	4	69.716				10305
11029	-35	7163	5.12	K5	20 47.002	0.11	6	68.682	-35 53 24.53	0.11	6	68.682	2909	15641		32909
11030	-56	4449	6.02	A0	20 51.238	0.14	5	69.786	-56 30 17.04	0.27	5	69.786	2910	15643	2666	32910
11031	-16	3238	8.2	K0	21 01.295	0.27	2	70.636	-17 20 46.62	0.12	2	70.636				10306
11032	-2	3337	8.3	K2	21 01.482	0.07	2	70.711	-3 00 50.77	0.08	2	70.711				10307
11033	-29	9060	9.0	K0	11 21 11.430	0.10	3	69.815	-30 12 55.61	0.08	4	69.677				10308
11034	-30	9163	9.0	K5	21 15.861	0.07	4	69.756	-30 42 37.53	0.08	4	69.756				10309
11035	-6	3370	8.5	F0	21 19.061	0.01	2	70.685	-6 52 22.62	0.05	2	70.685				10310
11036	-26	8525	7.53	K0	21 24.847	0.06	4	69.724	-26 41 00.80	0.17	4	69.724		15655	2670	10311
11037	-9	3275	8.4	K5	21 35.495	0.07	2	70.728	-10 24 10.96	0.05	2	70.728				10312
11038	-10	3257	8.0	F5	11 21 38.793	0.10	2	71.552	-10 50 58.57	0.08	2	71.552				10313
11039	-18	3167	8.6	K0	21 39.802	0.16	2	71.672	-18 42 12.50	0.02	2	71.672				10314
11040	-56	4460	8.2	G5	21 41.295	0.14	4	69.154	-57 22 58.98	0.15	4	69.154				10315
11041	-31	8967	8.8	K5	21 45.493	0.13	4	70.166	-31 29 46.66	0.15	4	70.166				10316
11042	-5	3275	7.04	F5	21 49.266	0.01	2	70.666	-5 38 03.88	0.05	2	70.666		15661		10317
11043	-21	3300	7.8	K2	11 21 54.826	0.15	4	70.190	-21 48 45.20	0.09	4	70.190				10318
11044	-41	6529	6.42	B3	21 58.121	0.04	55	71.128	-42 23 39.38	0.04	52	71.085	1294	15663	2671	31294
11045	-35	7180	8.9	K0	22 08.740	0.05	4	70.121	-36 07 21.75	0.10	4	70.121				10319
11046	-71	1248	5.69	B3	22 10.672	0.09	6	69.876	-71 58 54.60	0.11	6	69.876	2911	15667	2672	32911
11046 SP					22 10.688	0.12	22	71.433	-71 58 54.36	0.21	22	71.433	2911	15667	2672	52911
11047	+2	2421	8.1	G5	11 22 10.970	0.13	2	70.689	+2 22 16.86	0.14	2	70.689				10320
11048f	-23	9936	8.2	K0	22 12.540	0.13	4	70.256	-24 12 37.95	0.11	4	70.256				10321
11049	+2	2422	8.6	K0	22 16.759	0.03	3	71.922	+1 31 14.52	0.47	2	71.827				10322
11050	-38	7121	8.8	K2	22 18.093	0.12	4	70.222	-38 43 55.01	0.15	4	70.222				10323
11051	-22	3136	7.1	A3	22 18.162	0.02	4	70.683	-22 33 28.45	0.06	4	70.683				10324
11052p	-16	3244	4.14	A5	11 22 22.699	0.06	14	71.681	-17 24 32.94	0.09	13	71.650	431	15669	2673	30431
11053	+12	2335	5.96	K0	22 23.218	0.05	6	70.396	+11 42 18.61	0.05	6	70.396	2912	15670		32912
11054	-1	2521	6.66	A5	22 24.925	0.08	3	71.938	-1 56 13.89	0.20	2	71.833		15671		10325
11055	-66	1582	8.2	K5	22 27.017	0.13	4	69.747	-67 17 40.46	0.17	4	69.747				19425
11056	-35	7185	7.9	K0	22 31.693	0.17	4	70.492	-35 38 45.34	0.09	4	70.492				10326
11057	-3	3111	8.9	K2	11 22 32.874	0.04	2	72.246	-4 18 20.44	0.01	2	72.246				10327
11058	-7	3231	8.1	K0	22 34.438	0.19	2	72.279	-8 12 02.84	0.30	2	72.279			2674	10328
11059	-48	6459	9.0	K0	22 35.817	0.10	4	70.614	-48 45 51.62	0.11	4	70.614				1354
11060	-27	8075	8.5	A3	22 38.641	0.20	5	72.031	-28 23 31.59	0.08	5	72.031				10329
11061	-60	2914	8.4	G5	22 39.742	0.15	4	70.179	-61 00 21.66	0.24	4	70.179				10330

10999 SDS, 4.8m-5.4m, 0°4, 151°.
11048 A 8152AB, 11.4m, 2°2, 272°.

11052 A 8153, 8.0m, 5°0, 94°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
11062	-5	3278	8.8	K2	11	22	42.267	0.16	2	70.794	-5 35 38.15	0.29	2	70.794					10331
11063	-52	4546	7.9	K0			22 44.392	0.06	4	70.235	-52 44 49.45	0.14	4	70.235					10332
11064p	-58	3587	7.6	G5			22 44.474	0.18	5	70.589	-59 22 36.16	0.12	5	70.589					10333
11065	-39	7094	8.5	K0			22 44.736	0.18	4	70.224	-40 10 13.76	0.08	4	70.224					10334
11066	-62	2004	9.15	K2			22 52.311	0.31	4	70.213	-62 41 05.44	0.13	3	69.859		15675			10335
11067	-11	3092	8.4	K2	11	22	54.579	0.04	2	72.304	-11 53 31.72	0.09	2	72.304					10336
11068	+17	2356	5.63	F2			22 59.819	0.10	6	70.963	+16 43 53.81	0.21	5	70.904	2913	15677	2675		32913
11069	-75	726	9.1	K5			23 01.334	0.14	4	70.211	-76 20 12.75	0.16	4	70.211					19426
11069	SP						23 01.175	0.15	3	71.021	-76 20 12.07	0.80	3	71.021					19426
11070	-40	6713	8.8	K2			23 01.472	0.10	4	70.757	-40 27 05.53	0.12	4	70.757					1355
11071	+27	2021	7.15	A2	11	23	06.817	0.04	28	71.087	+27 01 19.80	0.08	27	71.149	1295	15682	2678		81295
11072	-41	6540	7.77	K0			23 07.020	0.05	4	70.709	-42 23 49.81	0.17	4	70.709		15683			1356
11073	+4	2463	6.36	F0			23 15.735	0.12	2	70.721	+4 08 07.51	0.00	2	70.721		15688			10337
11074	-25	8660	8.3	K0			23 20.082	0.12	3	70.553	-25 45 15.18	0.04	4	70.230					10338
11075	-12	3423	7.01	M0			23 22.782	0.01	2	72.279	-13 28 34.20	0.02	2	72.279		15690			10339
11076	-0	2440	8.4	F0	11	23	25.902	0.06	2	72.738	-0 48 12.09	0.21	2	72.738					10340
11077	-64	1661	8.5	K5			23 28.238	0.04	5	71.021	-65 14 06.67	0.08	5	71.021					19427
11078	-55	4366	8.4	K0			23 29.780	0.10	5	70.736	-56 10 09.72	0.11	5	70.736					10341
11079	-6	3379	8.8	K2			23 31.732	0.26	2	72.745	-7 14 30.75	0.27	2	72.745					10342
11080	-63	1892	7.8	F2			23 32.088	0.10	4	70.694	-63 32 01.87	0.16	4	70.694					10343
11081	-31	8992	9.0	K0	11	23	48.148	0.18	5	71.047	-32 20 27.36	0.16	4	70.774					10344
11082	+4	2465	8.8	G0			23 55.601	0.08	2	70.810	+3 46 00.01	0.09	2	70.810					10345
11083	-49	6163	8.5	K0			23 56.910	0.17	4	70.668	-49 51 00.87	0.08	4	70.668					1357
11084	-24	9743	8.8	K2			23 59.068	0.11	4	69.726	-24 58 09.55	0.16	4	69.726					10346
11085	-50	6008	9.5	K0			24 01.397	0.14	5	71.639	-51 21 52.76	0.12	5	71.639					1358
11086	-33	7737	8.6	K5	11	24	03.701	0.09	4	70.593	-33 51 53.99	0.15	4	70.593					10347
11087	-20	3420	6.79	A0			24 04.257	0.16	4	69.745	-21 04 52.69	0.13	4	69.745		15704	2681		10348
11088	+3	2502	6.54	K0			24 12.431	0.04	21	70.741	+3 17 12.61	0.06	19	70.640	1296	15705	2682		31296
11089	-46	7075	9.5	G5			24 14.031	0.11	4	70.229	-46 35 32.67	0.11	4	70.229					1359
11090	-50	6011	8.5	K2			24 17.474	0.21	4	70.263	-50 53 09.79	0.24	3	69.925					1360
11091	-60	2941	5.54	B5	11	24	19.806	0.12	6	70.700	-60 50 23.86	0.20	6	70.700		15708			21036
11092	-9	3288	8.1	F5			24 20.064	0.03	3	71.890	-9 39 56.02	0.40	2	71.778					10349
11093	-66	1588	9.0	G5			24 20.532	0.11	4	70.590	-66 48 13.57	0.13	4	70.590					19428
11094	-29	9106	8.3	F2			24 32.631	0.06	4	70.130	-29 39 33.28	0.02	4	70.130					10350
11095	-43	7073	8.8	K2			24 33.415	0.06	4	70.129	-44 04 30.56	0.08	4	70.129					1361
11096	-11	3098	5.96	F8	11	24	38.111	0.05	6	70.402	-12 04 54.20	0.14	6	70.402	2914	15714	2685		32914
11097*	-14	3326	7.71	K0			24 39.766	0.02	2	70.773	-15 22 18.11	0.06	2	70.773					10351
11098	-47	6844	8.2	K0			24 42.103	0.10	4	69.706	-47 29 08.77	0.07	4	69.706					1362
11099	-19	3270	8.4	K5			24 46.524	0.15	4	70.901	-20 30 50.74	0.09	4	70.901					10352
11100	-23	9978	7.5	K5			24 51.674	0.13	4	70.199	-23 53 40.01	0.09	4	70.199					10353
11101	-17	3386	8.4	K0	11	24	53.623	0.09	4	72.222	-18 14 39.39	0.38	3	72.242					10354
11102	+2	2432	7.6	K0			24 59.569	0.09	3	71.933	+1 34 36.45	0.08	2	71.826					10355
11103	+1	2566	7.6	K0			25 00.063	0.14	2	71.702	+1 13 55.81	0.41	2	71.702		15720			10356
11104	-12	3432	8.3	M0			25 04.711	0.26	2	71.685	-12 49 48.56	0.05	2	71.685					10357
11105	-15	3270	9.0	G0			25 19.521	0.03	3	71.924	-15 35 04.48	0.05	3	71.924					10358
11106	+3	2504	5.18	K0	11	25	21.948	0.03	52	71.321	+3 07 54.37	0.04	51	71.322	1297	15729	2686		31297
11107	-10	3271	8.6	F5			25 23.198	0.08	2	70.743	-10 47 08.48	0.07	2	70.743					10359
11108	-36	7195	8.3	K2			25 26.896	0.11	4	69.643	-37 00 47.48	0.11	4	69.643					10360
11109	-18	3180	8.6	K5			25 27.400	0.14	2	71.741	-18 58 26.08	0.00	2	71.741					10361
11110	-34	7469	7.8	K0			25 29.354	0.12	4	69.704	-35 16 25.74	0.06	4	69.704					10362
11111	-1	2528	8.6	K0	11	25	30.446	0.22	3	71.572	-2 11 47.46	0.05	3	71.572					10363
11112	-77	675	7.77	K0			25 30.780	0.04	4	69.590	-78 14 47.49	0.18	4	69.590		15734			19429
11112	SP						25 30.780	0.07	4	70.943	-78 14 47.38	0.15	4	70.943		15734			19429
11113	-6	3387	8.0	K0			25 37.410	0.28	2	70.721	-7 01 21.81	0.13	2	70.721					10364
11114	-34	7472	9.0	F5			25 39.029	0.11	5	70.044	-34 55 24.36	0.11	4	70.201					10365
11115	-81	500	8.9	K2	11	25	51.713	0.09	4	70.168	-82 14 30.33	0.12	4	70.168					19430
11115	SP						25 51.652	0.14	3	71.055	-82 14 30.41	0.26	3	71.055					19430
11116	-56	4518	8.2	K0			25 52.538	0.10	4	69.149	-57 13 48.95	0.14	4	69.149					10366
11117p	-45	7024	8.08	G0			26 01.603	0.14	4	69.664	-45 29 55.53	0.20	4	69.664		15743			1363
11118	-2	3353	8.8	A2			26 05.706	0.02	2	71.676	-3 06 06.48	--	1	72.075					10367
11119	+2	2437	8.6	K0	11	26	05.863	0.04	2	71.669	+2 08 48.30	0.13	2	71.669					10368
11120	-25	8694	8.1	K2			26 15.708	0.16	3	69.806	-26 05 02.28	0.13	4	69.670					10369
11121	-27	8113	8.4	K2			26 16.305	0.09	4	69.750	-27 28 58.05	0.14	4	69.750					10370
11122	-39	7127	7.6	G5			26 16.687	0.07	4	69.649	-39 32 41.55	0.14	4	69.649					10371
11123	-21	3316	7.9	K0			26 19.119	0.06	4	69.668	-22 07 11.86	0.11	4	69.668					10372
11124	-15	3275	8.1	M1	11	26	21.283	0.04	2	70.758	-16 19 08.88	0.08	2	70.758					10373
11125	+3	2508	8.8	K0			26 26.464	0.07	2	70.767	+3 00 36.07	0.09	2	70.767					10374
11126	-3	3128	7.9	F8			26 41.115	0.19	2	70.691	-4 10 31.05	0.06	2	70.691			2688		10375
11127	-78	652	9.1	G5			26 42.819	0.06	4	69.718	-79 13 40.51	0.28	4	69.718					19431
11127	SP						26 42.727	0.25	4	70.491	-79 13 41.12	0.34	4	70.491					19431
11128	-14	3332	8.9	K2	11	26	44.671	0.11	3	71.880	-14 50 10.74	--	1	72.287					10376
11129	+0	2793	8.0	K5			26 46.159	0.08	2	71.677	-0 04 01.48	0.30	2	71.677					10377
11130	-52	4601	8.7	K2			26 47.167	0.08	4	68.666	-53 04 19.33	0.13	4	68.666					10378
11131	-0	2444	7.43	K2			26 50.700	0.08	2	70.665	-0 34 23.93	0.09	2	70.665		15759			

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
11133	-9	3298	7.12	A3	11 27 05.653	0.10	2	70.661	-9 47 12.61	0.19	2	70.661		15766		10381
11134	-27	8121	6.79	K0	27 08.668	0.02	134	70.948	-27 45 17.34	0.02	127	70.904	1298	15767	2690	81298
11135	-16	3262	8.2	M0	27 26.807	0.50	2	71.242	-17 29 35.84	0.09	2	71.242				10382
11136	-52	4607	8.9	K0	27 27.582	0.14	4	69.627	-52 25 25.99	0.13	4	69.627				10383
11137	-6	3395	8.9	K0	27 30.465	0.06	2	70.787	-6 33 31.44	0.27	2	70.787				10384
11138	-54	4570	7.7	K2	11 27 34.297	0.13	4	69.766	-55 02 34.63	0.10	4	69.766				10385
11139	-44	7369	7.35	K2	27 35.952	0.04	4	69.676	-44 24 54.00	0.11	4	69.676		15776		1364
11140	-2	3360	5.07	K2	27 45.554	0.06	6	68.662	-2 43 38.84	0.17	6	68.662	2917	15779	2692	32917
11141	-13	3379	8.8	G0	27 49.744	0.02	2	69.844	-14 11 01.93	0.06	2	69.844				10386
11142	+19	2459	5.74	K0	27 52.444	0.12	6	69.411	+18 41 07.54	0.13	6	69.411	2918	15784		32918
11143	-41	6586	8.5	K5	11 27 52.763	0.09	4	69.706	-41 52 27.14	0.15	4	69.706				1365
11144	-49	6232	8.9	K5	27 55.662	0.09	5	69.688	-49 30 45.55	0.14	4	69.757				1366
11145	-12	3442	6.99	F0	28 06.993	0.08	2	70.404	-12 46 25.84	0.04	2	70.404		15786		10387
11146	-58	3675	7.3	K2	28 07.005	0.04	4	69.729	-59 21 04.89	0.17	4	69.729				10388
11147	-36	7222	9.1	K0	28 07.174	0.19	4	70.119	-36 29 36.34	0.07	4	70.119				10389
11148	-64	1667	8.9	K5	11 28 08.594	0.15	4	70.192	-64 44 29.88	0.18	4	70.192				19432
11149	-20	3441	8.8	A5	28 14.953	0.05	4	69.681	-21 16 44.34	0.09	4	69.681				10390
11150	-38	7176	7.12	G5	28 17.343	0.12	4	70.126	-38 57 34.49	0.09	4	70.126		15792		10391
11151f	-5	3304	7.6	F8	28 18.214	0.02	3	71.504	-6 26 35.25	0.49	3	71.504		15793		10392
11152	-46	7126	9.5	F8	28 18.664	0.06	4	70.172	-47 15 19.84	0.12	4	70.172				1367
11153	-29	9151	9.0	K0	11 28 24.811	0.04	3	71.437	-30 14 26.30	0.07	4	70.893				10393
11154	-36	7227	8.0	G5	28 25.365	0.05	4	69.706	-37 22 05.19	0.02	4	69.706				10394
11155	-19	3282	8.1	F5	28 25.956	0.10	4	70.157	-19 55 25.80	0.03	4	70.157			2698	10395
11156	-73	860	9.3	M1	28 26.738	0.10	4	70.627	-74 19 57.51	0.08	4	70.627				19433
11157*	-58	3677	7.77	G0	28 27.028	0.03	4	70.167	-58 32 07.89	0.16	4	70.167		15798		10396
11158	-60	3002	7.9	K0	11 28 28.357	0.18	4	69.636	-60 48 08.63	0.12	4	69.636				10397
11159	-47	6902	8.5	K0	28 28.824	0.04	4	70.196	-47 42 00.56	0.20	4	70.196				1368
11160	-42	7046	8.0	K2	28 39.464	0.17	4	69.743	-43 16 38.11	0.10	4	69.743				1369
11161	-34	7507	8.2	K0	28 45.976	0.23	4	70.427	-35 22 21.49	0.12	4	70.427				10398
11162	-4	3084	8.5	F5	28 47.450	0.15	2	70.687	-4 58 59.50	0.06	2	70.687				10399
11163	+3	2513	8.0	F0	11 28 49.087	0.01	2	70.687	+3 20 19.09	0.02	2	70.687		15803		10400
11164	-33	7789	8.2	K5	28 54.126	0.08	4	70.478	-33 26 31.96	0.32	4	70.478				10401
11165	-31	9064	8.5	K0	28 56.471	0.09	4	70.644	-32 21 04.77	0.11	4	70.644				10402
11166	-48	6580	8.5	G5	29 00.142	0.09	4	69.745	-48 47 32.59	0.17	4	69.745				1370
11167*	-83	417	8.25	A0	29 00.755	0.13	4	69.157	-83 49 10.70	0.13	4	69.157		15808		19434
11167 SP					11 29 00.907	0.10	4	69.663	-83 49 10.40	0.17	4	69.663		15808		19434
11168	-30	9278	8.7	K5	29 06.241	0.18	4	69.295	-30 50 00.44	0.05	4	69.295				10403
11169	-19	3285	6.26	F5	29 17.314	0.12	6	69.721	-20 30 02.64	0.14	6	69.721	2919	15815		32919
11170	-23	10025	8.3	K5	29 18.748	0.14	4	69.763	-24 15 47.06	0.02	4	69.763				10404
11171	-0	2447	7.6	A0	29 26.377	0.01	2	69.743	-1 30 22.88	0.10	2	69.743				10405
11172	-58	3693	5.26	A2p	11 29 29.485	0.13	6	69.510	-59 14 22.47	0.08	6	69.510	2920	15820	2701	32920
11173	-10	3286	8.9	K2	29 36.999	0.15	2	70.579	-11 05 13.72	0.21	2	70.579				10406
11174	+0	2801	8.1	F8	29 44.790	0.16	2	70.680	-0 08 14.23	0.05	2	70.680		15829		10407
11175	-75	738	8.3	K0	29 55.865	0.18	4	69.719	-76 01 36.75	0.15	4	69.719				19435
11175 SP					29 55.801	0.28	4	69.748	-76 01 36.60	0.28	4	69.748				19435
11176	-28	8931	7.58	M0	11 30 02.502	0.12	4	69.306	-28 51 56.48	0.07	4	69.306		15836		10408
11177	+2	2440	8.8	F8	30 02.572	0.11	2	69.750	+1 37 00.35	0.30	2	69.750				10409
11178	-18	3198	8.9	K0	30 08.399	0.09	2	70.688	-18 35 40.80	0.19	2	70.688				10410
11179	-15	3291	8.6	F5	30 11.620	0.01	2	70.720	-16 21 14.17	0.04	2	70.720				10411
11180	-8	3186	8.3	K2	30 12.297	0.36	2	69.870	-8 40 17.92	0.06	2	69.870				10412
11181	-27	8160	8.6	K5	11 30 12.514	0.05	4	69.674	-27 38 31.46	0.06	4	69.674				10413
11182	-7	3250	6.17	K0	30 14.905	0.06	6	70.353	-7 33 04.56	0.09	6	70.353	2921	15841		32921
11183	-11	3121	8.7	A0	30 16.636	0.25	2	71.582	-12 17 31.60	0.06	2	71.582				10414
11184	-11	3123	8.8	A2	30 19.469	0.07	2	70.685	-11 45 27.77	0.08	2	70.685				10415
11185	-39	7168	5.71	M0	30 21.541	0.10	6	68.750	-40 09 37.42	0.07	6	68.750	2922	15842		32922
11186	-51	5796	8.5	K0	11 30 23.645	0.04	4	68.686	-51 52 09.99	0.14	4	68.686				1371
11187	-64	1674	9.1	K0	30 29.823	0.08	4	68.662	-65 20 43.63	0.09	4	68.662				19436
11188	-31	9083	3.72	G5	30 31.898	0.02	146	71.397	-31 34 51.66	0.03	140	71.369	434	15845	2702	30434
11189	-44	7411	8.0	K5	30 39.173	0.11	4	69.660	-44 29 39.33	0.13	4	69.660				1372
11190	+4	2491	7.9	K0	30 45.545	0.28	2	69.840	+3 38 20.12	0.27	2	69.840		15849		10416
11191	+1	2580	8.9	K2	11 30 49.673	0.08	2	70.732	+1 04 46.99	0.09	2	70.732				10417
11192	+4	2492	8.7	A3	30 50.446	0.05	2	70.710	+4 24 37.75	0.35	2	70.710				10418
11193	-22	3164	8.3	K2	30 50.579	0.11	4	69.960	-22 51 38.62	0.10	4	69.960				10419
11194p	-50	6122	8.2	K0	30 55.170	0.19	4	69.154	-50 38 08.73	0.14	4	69.154				1373
11195	+3	2519	6.74	K5	31 02.184	0.01	2	71.542	+2 46 31.70	0.24	2	71.542		15852		10420
11196	-5	3313	7.7	K0	11 31 05.034	0.08	2	70.763	-6 15 38.43	0.12	2	70.763		15853		10421
11197	-25	8750	8.2	F5	31 07.089	0.08	4	69.792	-26 14 58.96	0.13	4	69.792				10422
11198	-30	9311	8.7	K5	31 18.274	0.12	4	69.792	-30 48 41.79	0.14	4	69.792				10423
11199	-40	6801	9.0	K0	31 25.781	0.12	4	69.661	-41 18 18.85	0.26	4	69.661				1374
11200	-52	4671	8.14	G5	31 27.267	0.10	4	69.325	-53 03 39.10	0.09	4	69.325		15861		10424
11201	-70	1393	8.7	K0	11 31 29.925	0.12	5	69.990	-71 08 08.80	0.06	5	69.990				19437
11202	-40	6804	9.0	K0	31 30.030	0.08	4	69.685	-40 42 27.39	0.13	4	69.685				1375
11203	-15	3297	7.21	K2	31 32.257	0.07	2	71.560	-15 46 09.96	0.34	2	71.560		15863		10425
11204	-39	7183	8.0	K5	31 46.078	0.15	4	69.716	-39 39 48.51	0.13	4	69.716				10426
11205	-14	3349	8.8	F8	31 47.723	0.16	2	72.175	-15 14 08.42	0.01	2	72.175				10427

11151 A 8190, 10.7m, 9°4, 330°.
11157 8.2m-9.1m, 0°3, 233°.

11167 8.5m-10.0m, 1°7, 31°.
11194 10.4m, 2°0, 95°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
11206	+ 3	2521	5.81	F5	11 31 48.126	0.06	6	69.160	+ 3 20' 14.87	0.11	6	69.160	2924	15867	2703	32924
11207	- 4	3096	6.70	A2	31 48.529	0.04	2	70.601	- 5 15 02.82	0.17	2	70.601		15868		10428
11208	-53	4627	7.7	M0	31 50.960	0.13	4	70.136	-54 16 44.65	0.16	4	70.136				10429
11209	-79	637	8.1	A2	31 53.785	0.21	5	70.150	-79 58 27.55	0.16	5	70.150				19438
11209 SP					31 53.728	0.20	3	69.396	-79 58 27.37	0.31	3	69.396				19438
11210	-13	3400	8.3	K0	11 31 56.106	0.02	2	70.657	-13 31 50.26	0.01	2	70.657				10430
11211	-33	7820	8.3	K2	31 57.737	0.06	4	69.720	-33 56 19.40	0.04	4	69.720				10431
11212	-24	9821	8.7	K2	31 58.117	0.12	4	69.263	-25 02 17.28	0.14	4	69.263				10432
11213	-56	4603	7.58	K0	31 58.983	0.13	4	69.743	-57 21 02.62	0.08	4	69.743		15872		10433
11214	-41	6622	9.0	K0	32 04.972	0.21	4	69.739	-42 22 24.94	0.13	4	69.739				1376
11215	-19	3298	8.6	K0	11 32 05.622	0.12	4	70.120	-20 01 22.51	0.14	4	70.120				10434
11216	- 1	2540	7.8	K0	32 14.058	0.10	2	70.823	- 2 12 53.37	0.18	2	70.823				10435
11217	-63	1923	8.7	A5	32 14.959	0.08	5	70.605	-63 40 42.90	0.08	5	70.605				10436
11218	-56	4604	7.4	K0	32 16.220	0.14	4	70.216	-56 52 33.45	0.07	4	70.216				10437
11219	- 7	3255	8.9	G5	32 18.713	0.07	2	70.817	- 7 39 01.58	--	1	70.356				10438
11220	- 1	2541	8.6	M0	11 32 19.329	0.13	2	70.765	- 1 57 13.41	0.18	2	70.765				10439
11221*	-31	9105	8.8	F5	32 19.501	0.16	4	69.844	-32 10 02.59	0.13	4	69.844				10440
11222	-53	4637	4.82	B8	32 22.727	0.07	6	70.334	-53 59 15.58	0.07	6	70.334	2926	15877	2706	32926
11223	- 3	3144	6.58	K0	32 25.789	0.04	2	71.265	- 4 05 03.70	0.22	2	71.265		15878	2707	10441
11224	-45	7107	8.5	K2	32 26.796	0.10	4	70.258	-46 10 39.42	0.08	4	70.258				1377
11225	-29	9194	7.28	K0	11 32 32.454	0.04	4	69.716	-29 45 19.16	0.04	4	69.716		15880		10442
11226*	-19	3302	7.9	F5	32 40.760	0.11	4	70.006	-20 16 52.34	0.19	4	70.006				10443
11227	-67	1766	8.7	A0	32 40.806	0.14	4	70.250	-68 10 32.64	0.20	4	70.250				19439
11228	-55	4470	8.4	G5	32 44.467	0.14	4	70.209	-55 45 22.53	0.07	4	70.209				10444
11229	-38	7218	8.7	K2	32 55.203	0.14	4	69.752	-38 31 35.55	0.14	4	69.752				10445
11230	+11	2377	6.45	A2	11 33 08.140	0.14	6	70.931	+11 11 16.77	0.07	6	70.931	2927	15892		32927
11231	-13	3407	8.6	R0	33 10.907	0.07	2	70.691	-14 19 00.17	0.07	2	70.691				10446
11232	-17	3418	8.8	M3	33 13.352	0.16	2	71.705	-17 39 02.70	0.20	2	71.705				10447
11233	+ 1	2586	8.54	K0	33 13.489	0.17	2	71.741	+ 0 29 10.78	0.39	2	71.741		15895		10448
11234	-77	696	9.0	A3	33 17.983	0.05	4	70.270	-77 41 35.55	0.22	4	70.270				19440
11234 SP					11 33 17.977	0.22	4	69.927	-77 41 35.19	0.43	4	69.927				19440
11235	- 3	3147	8.5	K0	33 18.392	0.06	2	70.720	- 4 28 45.57	0.08	2	70.720				10449
11236	-36	7278	9.3	K0	33 18.991	0.09	4	70.490	-37 11 29.94	0.13	4	70.490				10450
11237	-34	7563	8.52	K2	33 19.794	0.14	4	70.146	-34 30 34.94	0.07	4	70.146		15896		10451
11238	-62	2127	3.34	B9	33 27.689	0.03	77	71.032	-62 44 34.98	0.03	73	70.987	436	15899	2710	30436
11239	-46	7205	5.42	F0	11 33 29.741	0.05	34	70.576	-47 21 52.37	0.05	31	70.513	435	15901	2711	30435
11240*	-69	1560	8.0	G5	33 29.886	0.12	4	70.679	-69 55 49.48	0.22	4	70.679				19441
11241	-35	7315	9.0	K2	33 29.905	0.12	4	70.638	-35 41 27.35	0.05	4	70.638				10452
11242	-40	6824	9.0	G5	33 37.505	0.05	3	70.210	-41 15 21.34	0.16	3	70.210				1378
11243	+ 4	2501	7.6	G5	33 40.483	0.21	3	71.928	+ 3 34 41.01	0.23	3	71.928				10453
11244	-47	6974	7.88	K0	11 33 40.496	0.12	4	70.228	-47 57 09.69	0.06	4	70.228		15906		1379
11245	-44	7440	8.8	K2	33 41.069	0.17	4	70.198	-45 15 48.21	0.17	4	70.198				1380
11246	-42	7102	8.5	K5	33 46.181	0.04	4	70.216	-43 14 55.76	0.04	4	70.216				1381
11247	- 9	3325	7.9	F5	33 52.759	0.05	2	71.771	-10 09 32.49	0.04	2	71.771				10454
11248	-16	3290	6.99	G0	33 57.420	0.22	2	71.731	-16 34 21.93	0.12	2	71.731		15911		10455
11249	-60	3140	5.84	B3	11 34 01.644	0.08	6	71.385	-60 46 32.14	0.19	6	71.385		15913		21037
11250	-58	3741	8.0	K5	34 02.754	0.25	4	70.296	-59 09 16.76	0.14	4	70.296				10456
11251	-31	9125	8.9	K5	34 04.281	0.11	4	68.736	-31 44 13.09	0.13	4	68.736				10457
11252	- 8	3202	4.81	B9	34 08.490	0.05	17	71.383	- 9 31 32.00	0.06	17	71.383	1299	15921	2712	31299
11253	-70	1397	8.1	F2	34 11.219	0.06	4	70.685	-70 43 09.26	0.17	4	70.685				19442
11254	-60	3161	7.56	M0	11 34 14.302	0.06	5	70.468	-61 19 58.57	0.06	4	70.751		15925		10458
11255	- 8	3203	8.7	K0	34 19.246	0.09	2	70.719	- 8 38 40.09	0.15	2	70.719				10459
11256	-36	7293	7.8	K0	34 19.680	0.17	4	69.682	-36 45 43.71	0.10	4	69.682				10460
11257	- 0	2458	4.47	K0	34 23.249	0.02	81	70.992	- 0 32 50.26	0.03	78	70.933	437	15927	2713	80437
11258	-22	3179	6.67	K0	34 29.182	0.16	4	68.769	-22 40 17.98	0.13	4	68.769		15928		10461
11259	-51	5859	9.0	K0	11 34 33.861	0.13	4	70.986	-51 41 36.13	0.18	4	70.986				1382
11260	+ 0	2811	8.0	K0	34 43.079	0.05	3	71.227	- 0 18 04.28	0.23	2	70.766				10462
11261	-61	2448	8.39	K5	34 43.695	0.11	4	70.708	-62 12 30.62	0.30	4	70.708		15937		10463
11262	+ 2	2452	8.9	K2	34 46.007	0.04	2	71.761	+ 2 12 51.50	0.05	2	71.761				10464
11263	-20	3464	8.9	K0	34 50.624	0.09	4	68.784	-21 11 11.46	0.10	4	68.784				10465
11264	- 2	3383	8.0	K5	11 34 52.154	0.31	2	71.684	- 2 36 54.91	0.38	2	71.684				10466
11265	-53	4658	7.98	K0	35 00.612	0.16	4	70.420	-53 27 41.19	0.10	4	70.420		15942		10467
11266	- 7	3263	8.6	K5	35 09.818	0.04	2	72.180	- 7 52 26.96	0.19	2	72.180				10468
11267	-75	744	5.74	F0	35 10.148	0.03	64	71.093	-75 37 10.50	0.04	64	71.093	438	15946	2717	30438
11267 SP					35 10.116	0.07	55	70.945	-75 37 10.46	0.11	55	70.945	438	15946	2717	50438
11268	- 0	2464	8.2	F8	11 35 26.127	0.09	2	70.735	- 1 19 24.63	0.12	2	70.735				10469
11269	+ 4	2505	8.5	K0	35 30.936	0.22	2	71.263	+ 3 53 55.48	0.11	2	71.263				10470
11270	-66	1629	5.90	K0	35 31.409	0.11	7	71.102	-67 20 35.67	0.07	6	71.076	2930	15959	2719	32930
11271	-36	7302	9.2	G0	35 33.253	0.08	4	69.639	-37 23 58.80	0.03	4	69.639				10471
11272	-17	3424	7.20	A0	35 33.549	0.21	2	70.687	-17 54 53.82	0.18	2	70.687		15960		10472
11273	-40	6851	9.0	K0	11 35 36.075	0.05	4	69.661	-40 46 33.67	0.07	4	69.661				1383
11274	-52	4729	8.1	K0	35 41.590	0.09	5	70.437	-52 27 38.58	0.12	5	70.437				10473
11275	-18	3215	8.4	K0	35 44.284	0.02	2	71.584	-18 38 57.12	0.34	2	71.584				10474
11276	+ 8	2532	5.47	M3	35 52.887	0.11	6	70.075	+ 8 24 40.29	0.12	6	70.075	2932	15971		32932
11277	-37	7379	9.0	K2	35 54.636	0.09	4	69.728	-38 12 02.90	0.19	4	69.728				10475

11221 SDS, 9.0m-11.0m, 1°3, 154°.
11226 9.0m-9.4m, 0°5, 212°.

11240 8.6m-9.1m, 0°6, 69°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
11278	-10	3309	8.2	K5	11 35 54.649	0.18	2	69.918	-10 39 12.84	0.22	2	69.918				10476
11279	-49	6354	9.0	K5	35 58.763	0.12	5	70.402	-49 55 22.28	0.03	4	70.669				1384
11280	-59	3664	7.5	K	35 58.968	0.17	4	70.215	-60 22 37.56	0.13	4	70.215				10477
11281	-33	7865	8.6	F0	36 01.391	0.12	4	69.693	-33 56 55.50	0.16	4	69.693				10478
11282*	-12	3466	5.64	G0	36 07.600	0.26	2	70.777	-12 55 33.06	0.14	2	70.777		15977		10479
11283	-66	1630	9.4	G5	11 36 15.793	0.24	4	69.127	-66 42 25.67	0.08	4	69.127				19443
11284	-11	3144	9.0	K0	36 22.877	0.02	2	70.664	-11 51 40.32	0.25	2	70.664				10480
11285	-20	3471	8.2	A2	36 22.982	0.09	4	68.825	-20 53 48.02	0.10	4	68.825				10481
11286	-44	7473	9.62	G5	36 23.600	0.14	4	69.668	-45 05 05.38	0.15	4	69.668		15986		1385
11287	-14	3371	8.6	G0	36 28.575	0.01	2	69.681	-14 45 17.41	0.25	2	69.681				10482
11288	-24	9867	6.39	G5	11 36 29.573	0.08	6	69.362	-24 26 30.93	0.10	6	69.362	2933	15990		32933
11289	-23	10097	8.5	K2	36 32.626	0.09	4	69.278	-24 01 43.02	0.13	4	69.278				10483
11290	-3	3157	8.5	K2	36 46.030	0.14	2	70.646	-3 51 35.92	0.20	2	70.646				10484
11291	-26	8685	8.2	K2	36 48.030	0.09	4	69.278	-26 34 02.47	0.10	4	69.278				10485
11292	-24	9870	7.7	K0	36 51.495	0.14	3	70.786	-24 37 09.20	0.09	4	70.405				10486
11293	-38	7259	8.06	G5	11 36 53.672	0.21	4	69.722	-39 06 28.31	0.18	4	69.722		15994		10487
11294	+3	2527	8.5	F8	36 54.800	0.05	2	70.654	+3 07 22.51	0.04	2	70.654		15995		10488
11295	-50	6217	7.62	K2	36 57.184	0.21	4	68.683	-51 08 50.90	0.21	4	68.683		15997		1386
11296	-31	9157	8.9	K0	37 08.328	0.16	4	69.710	-32 19 18.83	0.09	4	69.710				10489
11297	-54	4691	8.7	G5	37 12.321	0.03	4	68.656	-55 20 09.11	0.11	4	68.656				10490
11298	-13	3420	6.39	A0	11 37 19.023	0.12	4	70.240	-14 11 28.49	0.09	4	70.240	2934	16009		10491
11299	-49	6377	6.82	A0	37 27.519	0.16	6	68.975	-50 12 31.70	0.13	6	68.975	2935	16013		32935
11300*	-29	9256	7.8	K0	37 30.929	0.09	4	69.658	-30 12 09.47	0.13	4	69.658				10492
11301	-36	7323	8.6	K2	37 31.723	0.16	4	69.755	-36 37 15.94	0.15	4	69.755				10493
11302	-34	7610	4.88	B8	37 43.350	0.02	136	71.188	-34 28 02.62	0.02	131	71.165	439	16019	2723	30439
11303	-2	3390	8.5	A5	11 37 44.085	0.17	2	69.821	-3 02 28.88	0.13	2	69.821				10494
11304	-38	7264	7.56	A2	37 44.900	0.13	4	69.733	-38 52 08.78	0.12	4	69.733		16021		10495
11305	-43	7217	8.5	K5	37 45.651	0.07	5	69.755	-43 28 08.12	0.12	4	69.841				1387
11306	-27	8237	7.24	M0	37 46.363	0.14	4	69.726	-28 13 09.34	0.08	4	69.726		16022	2724	10496
11307	+1	2597	6.83	A3	37 50.206	0.04	2	70.733	+1 13 45.89	0.20	2	70.733		16023	2725	10497
11308	-18	3221	8.4	G5	11 37 56.383	0.01	2	69.885	-19 10 41.52	0.02	2	69.885				10499
11309	+4	2510	8.6	G5	37 56.390	0.08	2	70.930	+3 55 55.01	0.19	2	70.930				10498
11310	-1	2555	8.8	K2	37 56.690	0.10	2	70.721	-1 33 37.54	0.19	2	70.721				10500
11311	-45	7188	9.0	K0	38 02.825	0.10	5	70.656	-46 17 03.16	0.24	5	70.656				1388
11312	-68	1545	7.49	K0	38 02.985	0.15	4	69.258	-69 23 39.50	0.11	4	69.258		16026		19444
11313	-7	3271	7.42	G0	11 38 03.742	0.00	2	71.277	-8 07 41.95	0.30	2	71.277		16027	2727	10501
11314	-63	1940	8.1	G0	38 07.588	0.07	4	69.273	-64 11 12.73	0.09	4	69.273				19445
11315	-29	9267	8.5	K0	38 08.607	0.06	4	69.806	-29 51 39.61	0.21	4	69.806				10502
11316	+22	2391	5.43	G5	38 11.088	0.07	6	69.494	+21 37 49.13	0.08	6	69.494	2936	16030		32936
11317	-48	6708	9.4	K0	38 16.213	0.12	4	70.136	-48 29 29.72	0.18	4	70.136				1389
11318	-9	3342	7.5	K0	11 38 18.172	0.19	2	70.705	-9 38 24.32	0.02	2	70.705				10503
11319	-4	3120	8.0	K2	38 18.312	0.01	2	69.914	-4 55 16.23	0.10	2	69.914				10504
11320	-54	4706	7.7	K0	38 27.636	0.06	5	70.063	-54 49 16.17	0.05	5	70.063				10505
11321	-25	8821	8.2	F5	38 30.605	0.03	4	70.195	-25 57 41.44	0.05	4	70.195				10506
11322	-70	1409	8.7	A0	38 34.064	0.07	4	69.737	-71 22 42.25	0.09	4	69.737				19446
11323	-15	3330	7.7	K5	11 38 38.801	0.06	2	69.762	-16 24 20.44	0.36	2	69.762		16043		10507
11324	-33	7899	8.3	K0	38 49.023	0.09	4	69.756	-34 13 20.51	0.14	4	69.756				10508
11325	-42	7155	5.69	A0	38 51.639	0.06	6	69.683	-42 49 06.20	0.07	6	69.683	2937	16048		32937
11326	-34	7619	7.08	A3	38 53.016	0.12	4	69.751	-35 19 34.67	0.11	4	69.751		16049		10509
11327	+1	2599	9.0	F5	38 53.993	0.22	2	70.679	+1 13 40.51	0.17	2	70.679				10510
11328	-56	4696	8.8	G5	11 39 00.187	0.06	6	69.859	-56 26 42.48	0.23	5	69.964				10511
11329	-82	469	6.22	K0	39 15.364	0.10	6	68.686	-82 49 21.33	0.06	6	68.686	3982	16057		33982
11329 SP					39 15.327	0.12	6	69.133	-82 49 20.95	0.22	6	69.133	3982	16057		53982
11330	-58	3791	8.1	K2	39 16.840	0.09	4	69.746	-58 27 47.25	0.20	4	69.746				10512
11331	-21	3360	8.20	M0	39 17.841	0.15	4	69.226	-22 22 31.43	0.09	4	69.226		16059		10513
11332	-67	1792	8.5	A2	11 39 18.055	0.11	4	69.242	-67 38 13.20	0.04	4	69.242				19447
11333	-6	3434	8.5	K0	39 19.609	0.13	2	70.646	-6 39 53.90	0.03	2	70.646				10514
11334	-56	4699	8.5	K0	39 22.688	0.08	4	70.141	-57 17 19.17	0.21	4	70.141				10515
11335	-62	2234	7.5	M0	39 26.882	0.17	4	69.666	-63 08 13.77	0.12	4	69.666				10516
11336	-19	3326	6.30	K0	39 31.838	0.05	3	69.235	-20 00 58.64	0.27	4	69.241		16069		10517
11337	-74	838	8.3	K2	11 39 41.772	0.09	4	70.206	-74 50 25.71	0.07	4	70.206				19448
11338	-37	7425	8.8	K5	39 42.406	0.16	4	69.716	-38 03 51.93	0.08	4	69.716				10518
11339	-12	3477	8.8	G5	39 47.165	0.19	2	69.773	-12 56 37.95	0.19	2	69.773				10519
11340	-48	6730	9.26	K0	39 49.559	0.09	4	69.707	-49 16 00.53	0.22	4	69.707		16073		1390
11341	-58	3799	8.7	K0	39 50.377	0.17	4	69.698	-58 58 57.01	0.16	4	69.698				10520
11342	-47	7057	8.5	K0	11 39 51.268	0.11	4	69.703	-47 53 44.44	0.16	4	69.703				1391
11343	-10	3325	8.9	K0	39 52.395	0.06	2	69.796	-11 14 25.39	0.15	2	69.796				10521
11344	-41	6717	9.2	K0	39 59.553	0.11	4	69.668	-42 17 57.11	0.11	4	69.668				1392
11345	-40	6901	9.2	K2	40 15.254	0.17	4	69.703	-40 50 09.42	0.18	4	69.703				1393
11346	-2	3399	7.2	A0	40 16.658	0.34	2	69.836	-3 16 02.49	0.15	2	69.836				10522
11347	-51	5970	8.0	K0	11 40 39.004	0.11	5	69.966	-52 09 55.93	0.05	5	69.966				10523
11348	-35	7397	8.7	G5	40 47.313	0.12	4	69.666	-35 27 37.64	0.17	4	69.666				10524
11349	-64	1690	8.0	K5	40 48.494	0.17	4	69.271	-65 06 04.88	0.09	4	69.271				19449
11350	-44	7528	8.5	K2	40 49.118	0.10	4	69.688	-44 49 02.09	0.05	4	69.688				1394
11351	-19	3329	7.12	K5	40 51.131	0.17	2	69.814	-19 32 44.00	0.22	2	69.814			2732	10525

11282 5.6m-11.0m, 1"4, 226°.

11300 SDS, 7.9m-11.0m, 1"4, 299°.

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
11352	-51	5977	8.5	K0	11 40 51.904	0.09	4	69.764	-51 32 29.86	0.11	4	69.764				1395
11353	-4	3131	8.3	K5	40 52.133	0.13	2	70.735	-5 09 46.48	0.02	2	70.735				10526
11354	-53	4720	8.0	K0	40 56.725	0.17	4	69.748	-54 01 42.06	0.10	4	69.748				10527
11355	-36	7371	6.12	K2	40 57.384	0.10	6	69.042	-36 54 44.79	0.11	6	69.042	2939	16086	2733	32939
11356	-30	9413	8.3	K0	40 59.240	0.11	4	69.176	-30 44 42.67	0.16	4	69.176				10528
11357	-33	7916	8.2	K2	11 40 59.416	0.07	4	69.702	-33 36 28.77	0.20	4	69.702				10529
11358	-8	3228	8.8	G0	41 00.847	0.20	2	70.784	-8 53 56.80	0.10	2	70.784				10530
11359	-13	3430	8.1	K0	41 01.629	0.12	3	71.290	-13 44 31.05	0.14	2	71.305				10531
11360	-23	10134	8.56	K0	41 04.946	0.07	4	69.264	-23 56 17.50	0.08	4	69.264		16089		10532
11361	-24	9913	8.6	F0	41 12.705	0.03	4	69.711	-25 23 10.70	0.12	4	69.711				10533
11362	-20	3492	7.9	F0	11 41 15.488	0.05	4	69.744	-20 45 38.96	0.07	4	69.744				10534
11363	-38	7297	7.6	F8	41 17.394	0.16	4	69.676	-38 38 29.78	0.11	4	69.676				10535
11364	-8	3229	6.84	K0	41 22.114	0.21	2	70.748	-8 51 16.90	0.09	2	70.748		16098		10536
11365	-17	3455	9.0	K0	41 23.320	0.08	2	71.360	-18 17 05.82	0.13	2	71.360				10537
11366	-9	3351	8.6	K0	41 30.771	0.05	2	71.366	-10 29 41.98	0.19	2	71.366				10538
11367	-14	3391	8.6	K0	11 41 31.703	0.12	2	71.375	-15 10 41.53	0.26	2	71.375				10539
11368	-25	8836	8.7	F8	41 36.614	0.15	4	70.206	-26 11 24.36	0.18	4	70.206				10540
11369	-16	3315	8.5	K2	41 36.806	0.11	2	70.750	-16 51 20.63	0.06	2	70.750				10541
11370	+26	2250	6.19	K5	41 37.070	0.09	6	69.462	+25 29 44.84	0.11	6	69.462	2940	16105		32940
11371	-44	7545	8.4	K5	41 40.275	0.08	4	69.670	-45 18 03.48	0.08	4	69.670				1396
11372	-26	8747	8.6	K5	11 41 46.274	0.10	4	69.797	-27 09 03.23	0.13	4	69.797				10542
11373	-0	2479	8.2	M0	42 02.389	0.19	2	69.681	-1 06 26.11	0.32	2	69.681				10543
11374	-50	6312	8.7	K0	42 04.004	0.15	4	69.133	-50 28 50.75	0.06	4	69.133				1397
11375	-7	3279	8.6	K5	42 04.558	0.38	2	70.378	-7 32 37.90	0.03	2	70.378				10544
11376	-19	3335	8.9	K0	42 05.180	0.06	4	70.266	-20 08 15.04	0.06	4	70.266				10545
11377*	-3	3169	8.2	F2	11 42 08.222	0.04	2	71.665	-4 13 58.43	0.26	2	71.665				10546
11378	-17	3460	4.90	G5	42 13.547	0.02	91	71.510	-18 04 22.11	0.03	88	71.490	1301	16112	2737	31301
11379	-60	3298	7.6	K5	42 13.868	0.20	4	69.725	-60 34 22.38	0.19	4	69.725				10547
11380	-41	6740	8.6	K0	42 15.493	0.09	4	69.597	-41 31 30.23	0.16	4	69.597				1398
11381	-3	3170	8.9	G5	42 16.491	0.16	2	71.699	-4 18 54.01	0.04	2	71.699				10548
11382	-55	4597	7.7	K2	11 42 18.624	0.24	4	69.251	-55 32 30.01	0.14	4	69.251				10549
11383	-77	731	8.4	K5	42 24.394	0.12	5	70.442	-77 32 23.15	0.22	5	70.442				19450
11383	SP				42 24.330	0.05	4	70.673	-77 32 22.58	0.19	4	70.673				19450
11384	+3	2545	8.7	K5	42 27.386	0.05	2	70.695	+2 37 52.61	0.28	2	70.695				10550
11385	+0	2831	7.35	K0	42 27.709	0.13	2	70.669	-0 14 21.86	0.13	2	70.669		16114		10551
11386	-73	885	7.4	K5	11 42 30.678	0.08	4	70.186	-73 39 55.93	0.10	4	70.186				19451
11387	+2	2474	8.2	K5	42 31.636	0.13	2	71.707	+1 51 22.50	0.05	2	71.707				10552
11388	-31	9217	7.9	K2	42 32.793	0.16	4	70.258	-31 29 55.91	0.08	4	70.258				10553
11389	+1	2608	8.2	K2	42 33.339	0.17	2	71.710	+1 11 14.40	0.51	2	71.710				10554
11390	-72	1157	7.23	K0	42 34.280	0.12	4	70.196	-72 52 22.08	0.13	4	70.196		16116		19452
11391	-5	3346	8.2	K0	11 42 44.389	0.13	3	71.898	-6 13 49.03	0.11	3	71.898				10555
11392	-34	7658	8.7	K5	42 47.968	0.11	4	69.647	-34 31 56.83	0.11	4	69.647				10556
11393	-21	3372	8.5	K2	42 54.462	0.08	4	71.447	-21 57 26.52	0.16	4	70.722				10557
11394	-65	1708	8.20	M0	42 56.022	0.07	5	70.792	-65 42 52.93	0.12	4	71.156		16125		19453
11395	-77	736	8.7	K0	43 02.955	0.15	4	70.136	-78 20 18.80	0.21	4	70.136				19454
11395	SP				11 43 02.867	0.22	4	70.716	-78 20 18.58	0.09	4	70.716				19454
11396	-15	3349	8.2	G0	43 06.070	0.15	2	71.625	-15 48 01.31	0.14	2	71.625				10558
11397	-34	7661	7.6	K0	43 06.885	0.13	4	69.635	-35 19 39.13	0.21	4	69.635				10559
11398	-30	9432	7.9	K2	43 08.588	0.03	4	70.649	-30 40 38.40	0.16	4	70.649				10560
11399	+3	2549	8.5	K0	43 08.657	0.05	3	71.942	+3 06 00.03	0.34	2	71.840		16129		10561
11400	-66	1640	3.80	A5	11 43 13.615	0.04	51	71.003	-66 27 04.52	0.04	49	71.009	442	16131	2739	30442
11401	-31	9228	9.5	K0	43 15.502	0.09	4	69.707	-31 42 04.48	0.14	4	69.707				10562
11402	+7	2479	4.20	M0	43 17.310	0.05	25	71.362	+6 48 30.79	0.05	24	71.366	1302	16135	2741	31302
11403	-42	7205	9.0	K0	43 29.351	0.11	4	69.621	-43 18 20.71	0.13	4	69.621				1399
11404	-54	4759	8.4	K0	43 32.719	0.07	5	70.646	-54 46 02.90	0.09	4	70.279				10563
11405	-11	3176	8.4	A3	11 43 41.992	0.50	2	70.404	-11 44 51.17	0.28	2	70.404				10564
11406	+0	2833	8.9	F8	43 42.436	0.08	2	71.375	+0 06 20.84	0.10	2	71.375				10565
11407	-68	1564	8.9	G5	43 45.170	0.08	5	71.147	-68 31 09.53	0.09	5	71.147				19455
11408	-2	3410	7.3	K0	43 46.148	0.07	2	71.306	-2 43 29.03	0.21	2	71.306				10566
11409	-35	7428	9.0	K5	43 47.730	0.04	4	69.641	-36 21 33.21	0.06	4	69.641				10567
11410	-27	8294	7.57	F8	11 43 49.780	0.11	4	69.338	-27 41 08.68	0.08	4	69.338		16140		10568
11411	-23	10162	7.46	M0	43 57.463	0.16	4	69.258	-24 12 23.69	0.08	4	69.258			2743	10569
11412	-59	3786	8.79	K0	44 04.737	0.09	5	71.181	-59 56 43.95	0.12	5	71.181		16146		10570
11413	-60	3325	4.22	G0	44 04.891	0.03	78	71.105	-60 54 01.45	0.04	77	71.092	443	16147	2744	30443
11414	-70	1428	8.99		44 06.414	0.10	5	71.267	-70 37 56.54	0.13	5	71.267		16148		19456
11415	-2	3411	7.50	F2	11 44 07.152	0.07	2	70.732	-3 27 51.75	0.22	2	70.732			2745	10571
11416	-65	1712	9.0	F5	44 09.276	0.12	5	70.799	-66 22 50.46	0.08	4	71.166				19457
11417	-39	7299	9.2	K2	44 09.800	0.05	4	69.707	-39 34 03.86	0.31	4	69.707				10572
11418	+4	2526	8.1	K0	44 12.700	0.07	2	69.681	+3 45 08.25	0.14	2	69.681				10573
11419	-48	6802	8.5	K0	44 13.477	0.07	4	69.685	-48 33 55.00	0.11	4	69.685				1400
11420	-61	2615	7.80	K2	11 44 15.034	0.15	4	69.791	-62 01 01.87	0.11	4	69.791		16152		10574
11421	-28	9083	8.5	K0	44 18.527	0.06	4	70.141	-29 04 37.12	0.07	4	70.141				10575
11422	-46	7370	8.8	K5	44 21.478	0.11	4	69.689	-47 11 42.26	0.18	4	69.689				1401
11423	-61	2619	8.3	K0	44 28.946	0.17	4	69.145	-61 25 06.80	0.17	4	69.145				10576
11424	-34	7681	7.6	F0	44 40.017	0.16	4	69.635	-35 07 08.45	0.18	4	69.635				18449

11377 9.1m-9.1m, 0°6, 62°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
11425	-29	9337	6.56	G0	11 44 45.019	0.13	4	69.796	-30 00 24.08	0.06	4	69.796		16162		10577
11426	-2	3414	8.8	G5	44 47.545	0.10	2	69.870	-2 48 26.65	0.19	2	69.870				10578
11427	-57	4989	5.44	K5	44 51.843	0.09	6	69.482	-57 25 07.45	0.11	6	69.482	2942	16165	2749	32942
11428	+2	2481	8.7	F5	44 51.848	0.00	2	70.669	+2 17 27.46	0.45	2	70.669				10579
11429	-75	754	8.38	M3	44 57.341	0.05	5	70.772	-76 20 23.74	0.10	5	70.772		16167		19458
11429	SP				11 44 57.387	0.15	4	69.939	-76 20 23.18	0.15	4	69.939		16167		19458
11430	-18	3242	8.4	K0	45 13.108	0.06	2	69.706	-19 07 23.37	0.12	2	69.706				10580
11431	+21	2358	4.54	F8	45 24.239	0.06	19	70.430	+20 29 48.54	0.06	19	70.430	1304	16173	2752	31304
11432	-51	6050	8.5	G5	45 43.063	0.19	4	69.192	-51 50 34.83	0.23	4	69.192				1402
11433	+29	2214	7.21	F2	45 49.674	0.16	7	70.399	+28 41 41.88	0.16	6	70.256	2943	16177	2753	32943
11434	-24	9965	7.7	A3	11 45 58.446	0.07	3	69.177	-24 48 28.15	0.09	4	69.198				10581
11435	-38	7343	7.9	K5	46 05.485	0.10	4	69.637	-38 27 46.23	0.09	4	69.637				10582
11436	-13	3448	6.92	K0	46 08.796	0.19	3	71.264	-14 03 58.31	0.21	2	71.266		16182		10583
11437	-26	8789	5.45	M3	46 13.222	0.03	57	71.543	-26 28 18.19	0.03	56	71.532	1305	16183	2754	31305
11438	-15	3358	8.2	K5	46 19.827	0.10	2	70.695	-16 19 11.70	0.13	2	70.695				10584
11439	-37	7483	9.1	K0	11 46 20.875	0.18	4	69.640	-38 03 21.07	0.13	4	69.640				10585
11440	-25	8880	8.3	A2	46 21.308	0.12	4	69.360	-25 46 12.34	0.16	4	69.360				10586
11441	-26	8792	8.2	K0	46 25.287	0.09	4	69.742	-27 13 54.35	0.05	4	69.742				10587
11442	+0	2843	6.24	F8	46 27.938	0.06	3	70.887	-0 02 26.78	0.18	3	70.887		16187		10588
11443	-8	3243	7.7	K0	46 29.812	0.10	2	70.696	-8 50 23.83	0.22	2	70.696				10589
11444	+15	2383	2.23	A2	11 46 29.877	0.02	111	71.015	+14 51 03.33	0.03	110	71.005	444	16189	2755	80444
11445	-6	3455	7.12	K5	46 37.513	0.13	2	69.813	-7 04 57.62	0.10	2	69.813		16191		10590
11446	+1	2617	8.7	K0	46 54.484	0.03	2	71.380	+0 53 14.13	0.78	2	71.380				10591
11447	-59	3832	7.30	K5	46 56.871	0.13	4	69.267	-60 08 51.70	0.06	4	69.267		16196		10592
11448	-16	3333	8.4	K2	47 05.483	0.03	2	70.832	-17 20 15.04	0.09	2	70.832				10593
11449	-49	6516	8.7	K0	11 47 09.393	0.13	4	69.724	-49 58 11.72	0.14	4	69.724				1403
11450	+3	2560	7.7	F5	47 12.843	0.16	2	69.713	+2 30 36.40	0.03	2	69.713				10594
11451	-32	8345	8.9	K5	47 13.511	0.16	4	69.716	-33 00 08.19	0.08	4	69.716				10595
11452	-12	3501	7.6	K2	47 13.622	0.09	2	70.780	-13 22 26.48	0.26	2	70.780				10596
11453	-63	1988	4.52	B5	47 14.182	0.09	6	69.822	-63 30 37.34	0.11	6	69.822	2944	16201		32944
11454	-52	4900	8.7	K0	11 47 14.939	0.20	4	69.268	-52 48 05.67	0.12	4	69.268				10597
11455	-45	7316	7.65	K0	47 18.446	0.11	4	70.137	-45 44 12.08	0.18	4	70.137		16203		1404
11456	-4	3149	8.0	K2	47 18.867	0.10	2	70.871	-4 34 16.71	0.02	2	70.871				10598
11457	-30	9483	9.1	K0	47 21.023	0.15	4	69.658	-31 12 02.23	0.15	4	69.658				10599
11458	-31	9282	9.2	K2	47 22.358	0.09	4	70.163	-32 13 39.92	0.13	4	70.163				10600
11459	-22	3223	8.5	A3	11 47 24.856	0.15	4	69.848	-22 45 47.62	0.09	4	69.848				10601
11460	-69	1595	4.90	G5	47 31.943	0.05	6	69.806	-69 56 51.61	0.12	6	69.806	2945	16206		32945
11461	-10	3346	8.6	K0	47 34.847	0.49	2	71.425	-10 46 02.47	0.73	2	71.425				10602
11462	-56	4812	7.8	K2	47 34.850	0.08	4	69.780	-56 46 08.08	0.09	4	69.780				10603
11463	-29	9373	9.0	G0	47 44.353	0.04	4	70.736	-30 15 47.04	0.21	4	70.736				10604
11464	-1	2576	8.0	G0	11 47 52.800	0.25	2	71.725	-2 08 25.19	0.29	2	71.725				10605
11465	-5	3367	8.0	K2	47 55.938	0.10	2	71.743	-5 55 57.81	0.38	2	71.743				10606
11466	-50	6397	8.5	K2	48 00.578	0.12	5	70.670	-50 39 54.80	0.10	5	70.670				1405
11467	-36	7452	7.7	K0	48 04.338	0.08	4	70.533	-37 24 10.21	0.26	4	70.533				10607
11468	+2	2489	3.80	F8	48 06.466	0.08	14	71.847	+2 02 41.64	0.07	13	71.823	445	16215	2758	30445
11469	-9	3378	8.5	M0	11 48 08.909	0.01	3	71.937	-9 40 10.14	0.05	2	71.849				10608
11470	-40	6977	9.0	K0	48 13.576	0.16	4	70.746	-40 35 15.47	0.15	4	70.746				1406
11471	-52	4917	8.9	K0	48 16.029	0.17	5	70.955	-53 22 15.01	0.12	5	70.955				10609
11472	-21	3394	8.5	K0	48 16.711	0.05	3	71.172	-21 51 56.26	0.05	4	70.694				10610
11473	-20	3519	8.4	A2	48 17.576	0.07	4	70.677	-20 43 29.97	0.02	4	70.677				10612
11474	-44	7611	9.0	K0	11 48 17.652	0.06	4	70.700	-44 40 46.46	0.15	4	70.700				1407
11475	-14	3418	8.0	K0	48 17.663	0.01	2	72.244	-15 06 38.87	0.00	2	72.244				10613
11476	-62	2350	8.8	A5	48 17.727	0.13	6	71.383	-63 22 20.43	0.11	6	71.383				10611
11477	-22	3229	8.9	K0	48 17.976	0.12	4	70.651	-22 57 27.92	0.09	4	70.651				10614
11478	+13	2465	6.22	A3	48 21.194	0.08	6	70.595	+12 33 24.78	0.12	6	70.595	2946	16219		32946
11479*	-55	4673	8.9	F5	11 48 22.654	0.08	4	70.369	-55 36 34.13	0.09	4	70.369				10615
11480	-41	6804	8.8	K5	48 27.484	0.08	4	70.188	-41 27 39.56	0.09	4	70.188				1408
11481	-4	3152	5.81	K0	48 28.745	0.03	54	70.961	-5 03 18.89	0.04	52	70.933	1306	16220	2759	81306
11482	-67	1836	7.95	K0	48 30.009	0.14	5	70.906	-67 48 09.39	0.14	4	71.299		16221		19459
11483	-7	3303	6.93	K0	48 37.554	0.23	2	72.162	-7 42 48.14	0.25	2	72.162		16224		10616
11484	-44	7614	4.71	K0	11 48 38.080	0.05	34	71.234	-44 53 43.01	0.06	33	71.206	446	16226	2761	30446
11485	-11	3190	6.22	F0	48 49.220	0.03	7	71.238	-11 54 36.16	0.06	7	71.238	2947	16231	2762	32947
11486	-42	7256	7.0	K0	48 50.294	0.09	4	70.212	-42 48 06.36	0.21	4	70.212				1409
11487	-35	7497	8.7	K0	48 59.540	0.04	4	70.632	-36 12 16.68	0.17	4	70.632				10618
11488	-39	7340	8.2	K2	49 02.803	0.17	4	70.746	-39 31 20.56	0.08	4	70.746				10619
11489	-17	3487	8.3	K0	11 49 03.975	0.18	2	71.722	-18 30 49.51	0.08	2	71.722				10620
11490	-35	7498	9.4	K0	49 06.324	0.10	4	70.703	-35 33 51.42	0.23	4	70.703				10621
11491	-30	9506	5.96	G0	49 09.526	0.09	6	70.908	-30 33 15.53	0.09	6	70.908	2948	16236	2764	32948
11492	-42	7260	9.3	A	49 09.950	0.15	4	70.623	-43 17 23.52	0.09	4	70.623				1410
11493	-60	3442	7.7	M0	49 14.177	0.22	4	70.174	-60 52 48.97	0.09	4	70.174				10622
11494*	-64	1724	5.10	B5	11 49 23.521	0.12	7	71.323	-64 50 39.58	0.04	7	71.323		16241		21038
11495	-48	6900	8.6	F5	49 39.790	0.03	4	69.754	-49 01 19.67	0.07	4	69.754				1411
11496	-57	5068	8.81	K0	49 40.787	0.09	4	69.815	-57 31 21.16	0.16	4	69.815		16245		10623
11497	-13	3458	7.7	F8	49 54.349	0.09	3	70.355	-13 50 58.95	0.22	2	70.890		16249		10624
11498	-72	1171	9.6	G0	49 59.774	0.22	4	70.839	-72 30 17.88	0.16	4	70.839				19460

11479 SDS, 9.5m-9.9m, 1st, 237°.11494 SDS, 5.2m-7.4m, 1st, 159°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
11499	+ 3	2567	8.9	K0	11 50 01.400	0.16	2	71.736	+ 3 25 48.40	0.06	2	71.736				10625
11500	-61	2725	8.01	K5	50 02.995	0.12	5	70.468	-62 10 11.52	0.02	3	70.577	16252			10626
11501	-47	7207	9.2	K2	50 22.661	0.07	4	69.687	-47 59 26.21	0.15	4	69.687				1412
11502	-45	7356	9.0	G5	50 23.499	0.14	4	69.714	-46 17 15.35	0.12	4	69.714				1413
11503	-69	1603	8.1	K5	50 25.295	0.21	4	69.810	-69 36 21.15	0.16	4	69.810				19461
11504	-64	1728	7.9	K0	11 50 27.164	0.07	4	70.153	-64 57 47.96	0.18	4	70.153				19462
11505	-26	8838	8.4	G0	50 33.596	0.08	4	69.726	-27 01 47.43	0.11	4	69.726				10627
11506	-27	8360	8.5	F0	50 40.843	0.10	4	70.120	-28 07 19.96	0.14	4	70.120				10628
11507	-13	3463	8.6	A3	50 45.876	0.04	2	69.886	-14 19 02.08	0.17	2	69.886				10629
11508	- 3	3197	8.3	K5	50 53.912	0.22	2	70.776	- 3 36 19.38	0.21	2	70.776	16264			10630
11509	-34	7760	6.28	A2	11 50 54.840	0.13	6	69.719	-34 47 17.31	0.14	6	69.719	2949	16265	2768	32949
11510	-15	3376	8.2	K0	51 00.502	0.22	2	71.579	-15 50 11.62	0.01	2	71.579				10631
11511	- 4	3158	8.8	K0	51 01.944	0.10	2	69.770	- 4 47 26.54	0.32	2	69.770				10632
11512	-19	3362	8.7	F8	51 05.262	0.07	4	70.185	-20 04 30.94	0.06	4	70.185				10633
11513	-16	3350	8.7	K0	51 14.066	0.03	2	70.586	-17 07 58.09	0.09	2	70.586				10634
11514	-66	1667	8.2	K2	11 51 15.705	0.09	4	70.126	-67 22 06.75	0.12	4	70.126				19463
11515	-33	8031	8.3	K2	51 17.228	0.04	4	69.691	-34 08 28.27	0.28	4	69.691				10635
11516	-25	8923	8.3	K2	51 18.159	0.08	3	70.571	-25 33 27.80	0.16	4	70.244				10636
11517	-23	10257	8.6	K0	51 19.656	0.09	4	70.689	-24 10 54.96	0.14	4	70.689				10637
11518	- 0	2507	8.4	K2	51 28.463	0.16	2	70.698	- 0 45 40.41	0.14	2	70.698				10638
11519	-29	9413	8.3	G5	11 51 33.031	0.20	4	70.710	-29 42 14.74	0.11	4	70.710				10639
11520	-30	9530	7.44	M0	51 38.835	0.09	5	71.006	-30 37 43.93	0.09	4	70.723	16278			10640
11521	-54	4830	8.5	K0	51 39.259	0.07	4	69.708	-54 54 04.73	0.22	4	69.708				10641
11522	- 6	3475	8.5	A0	51 40.769	0.25	2	71.605	- 7 06 20.21	0.19	2	71.605				10642
11523*	-36	7507	8.5	K2	51 41.631	0.21	5	70.356	-37 19 18.33	0.12	5	70.356				10643
11524	- 5	3381	8.7	G5	11 51 50.307	0.14	3	71.875	- 6 30 10.34	0.02	2	72.182				10644
11525	-57	5095	8.4	K0	51 51.558	0.09	4	69.342	-58 23 25.97	0.08	4	69.342				10645
11526	+ 4	2541	8.4	K0	51 54.898	0.08	2	71.679	+ 4 18 54.70	0.19	2	71.679				10646
11527	-41	6837	7.50	K5	51 58.078	0.17	4	69.717	-41 45 59.85	0.13	4	69.717	16282			1414
11528	- 8	3255	8.4	K0	52 01.695	0.12	2	71.685	- 9 26 13.40	0.13	2	71.685				10647
11529	-43	7360	8.5	K0	11 52 04.488	0.08	4	69.671	-44 23 12.17	0.10	4	69.671				1415
11530	-49	6605	9.0	K0	52 07.540	0.25	4	69.688	-49 34 40.87	0.26	4	69.688				1416
11531	-82	482	8.4	K2	52 08.193	0.03	4	69.652	-82 59 40.89	0.09	4	69.652				19464
11531 SP					52 08.283	0.09	4	69.698	-82 59 41.03	0.20	4	69.698				19464
11532	-25	8930	5.50	G5	52 09.593	0.09	6	69.353	-25 26 10.53	0.10	6	69.353	2950	16286	2771	32950
11533	-30	9537	8.38	K0	11 52 14.889	0.08	5	71.046	-31 23 22.93	0.18	4	70.767	16287			10648
11534	-22	3238	7.6	F5	52 15.350	0.08	4	70.466	-23 16 18.87	0.11	4	70.466				10649
11535	-11	3202	8.6	K0	52 16.318	0.03	2	71.610	-12 28 09.76	0.21	2	71.610				10650
11536	- 0	2510	7.9	G5	52 17.988	0.16	2	71.572	- 1 10 14.81	0.31	2	71.572	16290			10651
11537	- 1	2587	8.6	K0	52 20.994	0.22	3	71.206	- 2 05 48.09	0.11	3	71.206				10652
11538	-32	8393	8.6	G5	11 52 25.051	0.17	4	69.657	-32 46 55.20	0.23	4	69.657				10653
11539	-70	1443	8.0	K2	52 26.908	0.13	4	69.267	-70 35 56.94	0.12	4	69.267				19465
11540	+ 0	2858	8.4	F2	52 27.061	0.10	3	70.671	- 0 16 40.39	-	1	71.449				10654
11541	+ 9	2560	5.62	K0	52 29.161	0.12	6	69.386	+ 8 43 19.52	0.08	6	69.386	2951	16294		32951
11542	+ 2	2493	8.5	K5	52 30.089	0.07	2	70.694	+ 1 35 43.66	0.02	2	70.694				10655
11543	-80	605	8.9	A0	11 52 30.796	0.11	4	69.261	-80 43 43.08	0.20	4	69.261				19466
11543 SP					52 30.925	0.25	4	69.829	-80 43 43.24	0.27	4	69.829				19466
11544	+ 4	2544	8.0	A0	52 33.357	0.06	2	71.677	+ 3 29 48.79	0.41	2	71.677				10656
11545	-80	606	9.0	K0	52 38.356	0.08	4	70.154	-81 04 14.18	0.19	4	70.154				19467
11545 SP					52 38.328	0.15	4	69.978	-81 04 14.40	0.25	4	69.978				19467
11546	-43	7365	8.8	K5	11 52 40.809	0.09	4	69.707	-43 43 33.51	0.06	4	69.707				1417
11547	-34	7779	9.1	F5	52 45.837	0.16	4	69.763	-35 23 28.32	0.11	4	69.763				10657
11548	+26	2270	7.04	K0	52 50.050	0.10	6	70.016	+25 48 01.91	0.11	6	70.016	2952	16302		32952
11549	- 4	3162	7.10	A2	52 52.843	0.18	2	71.679	- 4 51 22.14	0.02	2	71.679	16305			10658
11550	-59	3935	8.2	K0	52 53.380	0.07	4	69.729	-59 43 24.27	0.16	4	69.729				10659
11551	-38	7407	8.9	F5	11 52 54.701	0.14	4	69.793	-39 19 38.78	0.05	4	69.793				10660
11552	-32	8400	7.6	K2	52 55.533	0.12	4	69.766	-33 10 22.70	0.02	4	69.766				10661
11553	-24	10041	6.82	K0	52 57.537	0.15	4	69.852	-24 34 47.09	0.09	4	69.852	16309			10662
11554	-27	8383	8.4	K0	52 59.048	0.07	4	70.680	-27 51 50.02	0.12	4	70.680				10663
11555	-42	7302	9.4	M0	53 03.814	0.14	4	70.263	-42 39 52.18	0.15	4	70.263				1418
11556	-51	6180	8.0	K5	11 53 06.063	0.13	4	69.724	-51 28 56.11	0.08	4	69.724				1419
11557	+16	2319	5.49	A2	53 06.290	0.04	35	71.403	+15 55 30.06	0.04	35	71.403	1308	16311	2772	31308
11558	- 7	3316	9.0	G5	53 09.072	0.03	2	70.744	- 7 55 30.68	0.42	2	70.744				10664
11559	-67	1858	7.6	M1	53 13.632	0.08	4	69.776	-68 16 15.93	0.08	4	69.776				19468
11560	-50	6491	9.0	K5	53 21.484	0.07	4	69.276	-50 41 16.54	0.08	4	69.276				1420
11561*	-21	3422	7.3	K2	11 53 22.181	0.09	4	70.110	-21 54 21.08	0.21	4	70.110				10665
11562	- 0	2512	8.6	F5	53 27.524	0.01	2	69.677	- 1 09 49.01	0.22	2	69.677				10666
11563	-16	3358	5.16	A0	53 27.765	0.02	149	71.158	-16 52 20.89	0.02	143	71.121	1309	16319	2773	81309
11564	-63	2039	7.9	K0	53 28.601	0.03	5	70.334	-64 21 17.23	0.06	5	70.334				19469
11565	-86	238	9.1	K5	53 57.402	0.22	4	69.823	-87 07 29.46	0.15	4	69.823				19470
11565 SP					11 53 56.791	0.12	3	70.440	-87 07 29.38	0.01	3	70.440				19470
11566	-25	8941	8.4	K0	53 59.435	0.08	4	69.822	-26 15 31.62	0.21	4	69.822				10667
11567	-39	7377	8.5	K0	54 04.509	0.07	4	70.181	-40 22 33.27	0.14	4	70.181				1422
11568	-46	7517	9.3	K0	54 04.527	0.18	5	70.595	-46 29 16.07	0.21	4	70.429				1421
11569	-44	7666	8.8	K5	54 06.423	0.07	4	70.174	-45 16 06.21	0.09	4	70.174				1423

11523 SDS, 8.7m-10.9m, 1°1, 43°.

11561 A 8353, SDS, 7.8m-11.5m, 1°5, 213°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
11570	-18	3277	8.5	K2	11 54 07.363	0.23	2	70.702	-19 30 33.29	0.08	2	70.702				10668
11571	-35	7563	9.1	K0	54 08.510	0.10	4	70.171	-36 13 04.09	0.10	4	70.171				10669
11572	-9	3396	7.3	F2	54 11.916	0.15	2	71.588	-10 26 44.56	0.35	2	71.588				10670
11573	-38	7418	7.79	G5	54 18.332	0.08	5	70.547	-38 34 14.83	0.22	5	70.547	16337			10671
11574	+3	2576	8.2	K2	54 24.540	0.02	2	71.603	+2 41 26.38	0.12	2	71.603				10672
11575	-3	3210	6.87	F5	11 54 26.911	0.04	2	71.363	-4 30 16.29	-	1	71.449		16343		10673
11576*	-24	10050	7.9	F8	54 29.156	0.11	4	70.771	-25 12 10.88	0.09	4	70.771				10674
11577	-17	3514	8.8	K2	54 34.513	0.09	2	70.851	-18 06 16.04	0.41	2	70.851				10675
11578	-34	7803	7.63	K5	54 42.409	0.04	4	69.635	-34 54 53.58	0.11	4	69.635	16348			10676
11579	-57	5131	8.6	K2	54 44.670	0.20	4	68.678	-57 46 27.98	0.18	4	68.678				10677
11580*	-79	661	7.5	A0	11 54 49.365	0.08	4	69.634	-80 12 58.71	0.11	4	69.634				19471
11580 SP					54 49.264	0.07	4	70.005	-80 12 58.44	0.18	4	70.005				19471
11581	-10	3372	8.4	K2	54 49.725	0.03	4	70.054	-11 31 33.12	0.26	3	70.311				10678
11582	-22	3249	8.5	K5	54 58.777	0.08	4	70.637	-22 55 25.71	0.05	4	70.637				10679
11583	-61	2829	5.70	B5	55 08.366	0.06	6	70.608	-62 10 13.11	0.07	6	70.608	16357			21039
11584	+18	2546	6.91	F2	11 55 08.481	0.07	6	68.999	+17 44 45.84	0.12	6	68.999	2955	16358		32955
11585	-36	7556	8.6	M1	55 10.098	0.04	4	69.683	-37 22 19.78	0.04	4	69.683				10680
11586	-24	10057	8.9	A0	55 13.693	0.11	4	70.231	-24 30 39.04	0.15	4	70.231				10681
11587	-9	3400	8.0	K2	55 14.034	0.07	2	69.825	-9 52 44.91	0.01	2	69.825				10682
11588	-74	863	8.8	K2	55 19.184	0.15	4	69.261	-75 05 55.44	0.27	4	69.261				19472
11588 SP					11 55 19.244	0.17	4	70.424	-75 05 55.43	0.47	4	70.424				19472
11589	-26	8883	7.16	K5	55 25.389	0.14	4	69.761	-27 25 24.40	0.17	4	69.761	16365			10684
11590	-47	7267	9.1	K0	55 25.465	0.11	4	69.668	-47 46 56.30	0.06	4	69.668				1424
11591	-13	3479	8.3	A3	55 26.404	0.13	2	70.722	-13 49 58.30	0.39	2	70.722				10683
11592	-56	4914	7.27	K0	55 27.979	0.10	5	69.975	-56 35 11.84	0.13	5	69.975	16366			10685
11593	-71	1297	8.5	F2	11 55 28.359	0.13	4	68.715	-71 30 16.22	0.18	4	68.715				19473
11594	+33	2174	6.30	F0	55 33.092	-	1	73.064	+32 33 08.76	-	1	73.064	1310	16368	2778	31310
11595	+1	2633	7.7	K0	55 39.244	0.14	2	69.800	+1 08 52.20	0.16	2	69.800				10686
11596	-55	4751	5.64	B8	55 42.854	0.09	6	69.051	-56 02 19.91	0.10	6	69.051	2956	16371	2779	32956
11597	+5	2563	8.41	K2	55 56.522	0.05	2	69.677	+4 37 08.49	0.31	2	69.677				10687
11598	-77	766	6.81	A2	11 56 05.423	0.13	6	69.723	-77 32 48.90	0.12	6	69.723	2957	16379		32957
11598 SP					56 05.242	0.40	6	70.760	-77 32 49.22	0.20	6	70.760	2957	16379		52957
11599	-16	3367	8.8	F8	56 12.072	0.18	2	70.668	-17 28 50.62	0.40	2	70.668				10688
11600	-47	7278	8.0	K0	56 13.381	0.12	4	69.653	-48 21 47.85	0.12	4	69.653				1425
11601	-14	3439	8.3	F2	56 13.395	0.20	2	70.664	-14 35 13.11	0.12	2	70.664	16382			10689
11602	-35	7584	9.1	G	11 56 17.579	0.16	4	69.667	-36 08 04.36	0.03	4	69.667				10690
11603	-8	3267	8.2	K5	56 21.646	0.19	2	70.695	-9 02 08.32	0.22	2	70.695				10691
11604	-57	5155	7.7	K0	56 30.604	0.13	5	69.578	-58 10 04.20	0.05	4	69.638				10692
11605	-73	913	7.7	K0	56 30.737	0.06	4	69.248	-73 43 48.20	0.08	4	69.248				19474
11606	-9	3408	6.76	K2	56 35.743	0.07	6	69.470	-10 11 51.98	0.12	6	69.470	2958	16387		32958
11607	-51	6236	6.18	K2	11 56 37.921	0.09	6	69.771	-51 25 05.78	0.05	6	69.771	2959	16389	2782	32959
11608	-29	9468	6.97	K5	56 48.906	0.14	4	68.707	-29 46 56.67	0.24	4	68.707			2783	10693
11609	+2	2499	7.03	K0	56 50.201	0.25	2	70.747	+2 06 19.67	0.01	2	70.747	16394			10694
11610	-61	2859	8.5	K5	56 52.279	0.11	4	69.299	-61 34 19.72	0.11	4	69.299				10695
11611	+3	2583	9.0	K0	56 54.163	0.07	2	70.720	+3 10 03.07	0.01	2	70.720				10696
11612	-34	7826	7.27	K0	11 56 58.463	0.16	4	69.666	-35 01 48.44	0.05	4	69.666		16399		18450
11613	-1	2600	7.12	K0	57 00.306	0.05	2	69.830	-1 38 24.28	0.24	2	69.830		16400		10697
11614	-32	8438	9.3	K0	57 00.643	0.05	3	69.514	-32 40 06.37	0.20	3	69.514				10698
11615	-38	7435	8.3	K2	57 07.032	0.19	4	69.739	-39 13 51.41	0.10	4	69.739				10699
11616	-3	3217	8.3	K5	57 11.553	0.16	2	69.866	-3 40 35.46	0.13	2	69.866				10700
11617	-62	2498	7.78	K5	11 57 15.944	0.09	4	69.301	-62 33 11.55	0.13	4	69.301		16404		10701
11618	-6	3492	8.4	A5	57 21.281	0.04	2	70.803	-7 21 48.15	0.00	2	70.803				10702
11619	+4	2556	5.24	A0	57 23.172	0.09	6	70.398	+3 56 00.70	0.05	6	70.398	2960	16406	2785	32960
11620	-48	7026	9.0	G5	57 34.929	0.13	4	70.427	-48 29 35.26	0.01	4	70.427				1426
11621	-44	7695	8.12	F8	57 35.776	0.12	4	69.717	-44 34 55.55	0.10	4	69.717	16413			1427
11622	-52	5122	8.0	K0	11 57 40.353	0.10	4	68.704	-52 34 31.98	0.22	4	68.704				10703
11623	-15	3400	8.4	K2	57 42.159	0.01	2	70.731	-16 23 43.91	0.30	2	70.731				10704
11624	-14	3443	8.8	K2	57 48.440	0.08	2	70.874	-14 56 46.86	0.37	2	70.874				10705
11625	-29	9486	7.9	G5	57 49.902	0.19	3	69.913	-30 19 20.70	0.06	4	69.750				10706
11626	-34	7839	9.2	F5	57 51.052	0.13	4	69.729	-34 29 45.09	0.09	4	69.729				10707
11627	-21	3442	8.7	A2	11 57 55.769	0.04	4	68.859	-21 36 05.10	0.15	4	68.859				10708
11628	-59	3995	8.3	G5	57 59.261	0.11	5	70.038	-59 40 40.91	0.09	5	70.038				10709
11629	-4	3181	8.7	F0	58 04.510	0.09	2	69.810	-4 50 32.21	0.13	2	69.810				10710
11630	-53	4892	8.5	K0	58 05.710	0.13	4	69.586	-53 46 28.29	0.10	4	69.586				10711
11631	-2	3449	8.8	F8	58 08.186	0.07	2	71.367	-2 39 09.00	0.13	2	71.367				10712
11632	-48	7034	8.02	K0	11 58 14.609	0.12	4	69.725	-49 17 24.18	0.05	4	69.725		16422		1428
11633	-54	4906	9.0	K0	58 16.247	0.15	4	69.758	-54 26 51.56	0.11	4	69.758				10713
11634	-18	3295	5.28	B3	58 17.475	0.07	6	69.679	-19 22 50.28	0.11	6	69.679	2961	16423	2790	32961
11635	+7	2502	4.57	A3	58 18.614	0.02	118	71.797	+6 53 34.38	0.03	112	71.787	1311	16425	2791	31311
11636	-54	4907	8.3	K0	58 19.779	0.05	4	69.716	-55 22 44.48	0.26	4	69.716				10714
11637	-66	1688	8.7	K2	11 58 23.609	0.10	4	69.260	-66 36 54.87	0.14	4	69.260				19475
11638	-31	9408	8.0	K0	58 23.802	0.05	4	69.220	-31 44 40.73	0.14	4	69.220				10715
11639	-25	8989	8.0	K0	58 27.031	0.17	4	69.286	-26 12 04.89	0.13	4	69.286				10716
11640	+4	2560	7.9	F5	58 36.416	0.01	2	69.798	+3 54 39.37	0.39	2	69.798	16427			10717
11641	-19	3392	7.9	K0	58 49.564	0.09	4	69.696	-20 23 06.33	0.20	4	69.696				10718

11576 A 8360, SDS, 8.9m-9.7m, 0°9, 58°.

11580 SDS, 7.6m-10.3m, 1°1, 118°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
11642	-33	8124	7.09	K0	11 58 51.097	0.05	4	69.710	-33 46 18.73	0.09	4	69.710		16430		10719
11643	+ 0	2878	8.5	K	58 54.170	0.18	2	70.824	- 0 06 01.55	0.00	2	70.824		16433		10720
11644	-18	3299	8.4	K0	59 05.487	0.05	2	70.720	-19 03 37.60	0.20	2	70.720				10721
11645	-47	7314	8.0	K0	59 10.918	0.04	4	70.074	-47 55 47.73	0.27	4	70.074				1429
11646	-72	1194	6.92	A0	59 16.754	0.07	6	69.806	-73 01 11.99	0.07	6	69.806	2964	16444		32964
11646	SP															
11647	-50	6593	9.3	K0	11 59 16.697	0.14	19	71.433	-73 01 12.45	0.20	19	71.433	2964	16444		52964
11648	- 5	3403	8.2	K0	59 20.325	0.22	5	69.131	-51 13 35.21	0.15	4	69.080				1430
11649	-43	7427	9.5	A0	59 21.391	0.11	3	70.997	- 6 00 14.81	0.27	3	70.997				10722
11650	-26	8928	8.5	G0	59 29.828	0.16	4	69.714	-44 07 46.97	0.29	4	69.714				1431
					59 39.530	0.08	4	69.671	-27 22 08.83	0.11	4	69.671				10723
11651	-84	371	5.89	K2	11 59 44.117	0.09	6	69.120	-85 21 11.84	0.14	6	69.120	3983	16449	2795	33983
11651	SP				59 44.109	0.20	6	69.407	-85 21 11.77	0.39	6	69.407	3983	16449	2795	53983
11652	+ 1	2641	8.0	K2	59 47.546	0.01	2	69.821	+ 0 50 31.43	0.43	2	69.821				10724
11653	-42	7378	9.4	G5	59 49.760	0.06	4	69.720	-43 07 10.63	0.13	4	69.720				1432
11654	-11	3225	8.1	K5	59 52.673	0.13	2	69.881	-11 39 20.59	0.01	2	69.881				10725
11655	-38	7466	7.88	K2	11 59 58.495	0.11	4	70.193	-38 45 02.35	0.09	4	70.193		16454		10726
11656	-74	867	8.5	K2	12 00 01.366	0.07	4	69.265	-74 29 59.55	0.14	4	69.265				19476
11657	-70	1455	8.0	M2	00 02.511	0.12	5	70.004	-70 34 50.92	0.04	5	70.004				19477
11658	-68	1604	6.10	B8	00 03.089	0.10	6	70.712	-68 54 49.44	0.19	6	70.712	2966	16455	2796	32966
11659	- 9	3420	8.7	G0	00 05.552	0.15	2	70.875	-10 26 06.73	0.08	2	70.875				10727
11660	-46	7606	8.8	K5	12 00 13.632	0.11	4	70.245	-46 47 40.45	0.12	4	70.245				1433
11661	-35	7643	8.2	M0	00 13.859	0.14	4	70.189	-35 37 52.43	0.15	4	70.189				10728
11662	-16	3379	8.9	K5	00 20.738	0.06	2	70.623	-17 24 04.17	0.15	2	70.623				10729
11663	-41	6928	8.0	K2	00 21.980	0.19	4	70.442	-41 53 25.78	0.30	4	70.442				1434
11664	-12	3553	8.9	K0	00 24.252	0.20	2	69.761	-12 47 47.71	0.27	2	69.761				10730
11665	-21	3461	7.96	K5	12 00 26.029	0.10	4	69.276	-21 52 26.39	0.18	4	69.276		16460		10731
11666	-27	8465	8.1	K0	00 28.277	0.30	3	70.495	-27 58 48.35	0.13	4	70.186				10732
11667	-15	3405	8.4	A0	00 32.816	0.00	2	70.408	-16 10 40.39	0.06	2	70.408				10733
11668	- 2	3453	7.7	K2	00 39.541	0.04	2	70.800	- 3 06 59.25	- -	1	70.324				10734
11669	-35	7650	9.1	K0	00 41.116	0.11	4	70.222	-36 15 20.03	0.11	4	70.222				10735
11670	- 0	2526	8.6	K2	12 00 41.680	0.25	2	71.384	- 1 21 03.27	0.12	2	71.384				10736
11671	-16	3380	8.9	K0	00 45.828	0.09	2	71.690	-17 00 40.10	0.19	2	71.690				10737
11672	-30	9633	7.9	K0	00 51.352	0.02	4	69.296	-31 13 52.73	0.07	4	69.296				10738
11673	-71	1302	8.0	G5	00 55.154	0.07	4	69.338	-71 54 56.71	0.16	4	69.338				19478
11674	- 4	3192	7.20	A0	01 01.782	0.05	2	70.664	- 5 12 03.69	0.18	2	70.664		16470		10739
11675	-60	3665	8.4	K0	12 01 02.596	0.09	4	69.287	-60 40 10.02	0.09	4	69.287				10740
11676	-41	6938	5.28	F0	01 04.337	0.03	53	71.318	-42 09 17.10	0.03	50	71.285	449	16472	2797	30449
11677	-31	9440	9.2	M1	01 04.574	0.09	4	70.069	-32 07 56.75	0.24	4	70.069				10741
11678	-58	4044	9.1	G5	01 08.566	0.09	4	69.829	-58 28 05.38	0.18	4	69.829				10742
11679	-52	5183	7.15	G5	01 17.465	0.14	4	69.775	-53 13 10.90	0.04	4	69.775		16478		10743
11680	-34	7877	7.8	K5	12 01 18.250	0.13	4	70.237	-34 31 48.71	0.18	4	70.237				10744
11681	-40	7087	9.3	K5	01 18.797	0.12	4	70.340	-41 03 41.16	0.10	4	70.340				1435
11682	-50	6622	8.1	K5	01 21.064	0.17	4	69.741	-50 31 48.32	0.13	4	69.741				1436
11683	-29	9528	9.1	K0	01 24.237	0.05	4	69.646	-30 20 47.48	0.19	4	69.646				10745
11684	- 9	3425	6.59	A2	01 26.468	0.24	2	71.701	-10 01 04.37	0.02	2	71.701		16481		10746
11685	+ 2	2509	8.3	A2	12 01 39.340	0.21	2	71.716	+ 1 44 26.39	0.25	2	71.716				10747
11686	-62	2561	4.98	B3	01 43.790	0.06	6	70.660	-62 53 14.12	0.14	6	70.660		16490		21040
11687	- 8	3280	8.9	F0	01 44.717	0.08	2	71.741	- 9 04 47.72	0.28	2	71.741				10748
11688	-62	2563	8.0	K0	01 57.055	0.15	4	69.843	-63 17 55.68	0.04	4	69.843				10749
11689	-37	7640	9.0	K1	01 58.423	0.08	5	70.999	-38 01 35.94	0.19	5	70.999				10750
11690	+ 3	2594	8.0	K2	12 02 03.322	0.19	2	71.728	+ 3 26 24.89	0.12	2	71.728				10751
11691	-24	10133	8.3	K5	02 07.139	0.04	4	68.895	-24 37 21.49	0.06	4	68.895				10752
11692	-81	547	8.4	K0	02 08.954	0.13	4	70.250	-81 58 36.21	0.13	4	70.250				19479
11692	SP				02 08.905	0.11	4	69.431	-81 58 35.98	0.17	4	69.431				19479
11693	+ 4	2569	7.24	K0	02 09.331	0.17	2	71.725	+ 3 51 06.20	0.44	2	71.725		16495		10753
11694	- 7	3339	8.4	A0	12 02 10.226	0.03	4	72.384	- 7 41 53.78	0.14	4	72.384				10754
11695	-69	1626	7.85	K5	02 23.258	0.05	5	70.013	-69 43 25.05	0.13	4	70.182		16504		19480
11696	-74	875	7.6	K2	02 23.871	0.12	4	69.330	-75 24 31.08	0.21	4	69.330				19481
11696	SP				02 23.859	0.11	4	69.853	-75 24 30.84	0.31	4	69.853				19481
11697	-45	7515	9.0	K2	02 24.857	0.14	4	70.286	-45 55 04.36	0.13	4	70.286				1437
11698	-34	7897	8.7	K0	12 02 25.979	0.07	4	70.686	-35 22 09.92	0.13	4	70.686				10755
11699	-13	3486	8.4	K2	02 28.012	0.13	3	71.229	-14 15 08.63	0.14	2	70.770				10756
11700	+ 2	2512	8.3	K0	02 37.171	0.04	3	71.219	+ 2 27 44.20	0.18	2	70.748		16510		10757
11701	-33	8159	7.52	M0	02 37.447	0.15	4	70.015	-33 55 50.33	0.12	4	70.015				10758
11702	+ 9	2583	4.24	G5	02 39.378	0.02	105	70.923	+ 9 00 39.18	0.03	100	70.887	450	16512	2799	80450
11703	- 0	2532	8.4	G5	12 02 39.734	0.04	2	70.807	- 1 13 52.26	0.11	2	70.807		16513		10759
11704	-39	7453	9.0	G5	02 51.598	0.07	4	70.698	-40 08 01.77	0.10	4	70.698				10760
11705	-64	1788	8.1	K2	02 52.782	0.09	4	69.722	-64 36 11.89	0.07	4	69.722				19482
11706	-36	7636	8.0	K5	02 53.388	0.14	4	70.240	-37 16 26.02	0.07	4	70.240				10761
11707	-40	7105	8.9	G5	03 07.946	0.10	4	70.065	-40 32 10.47	0.16	4	70.065				1438
11708	-15	3415	8.8	K2	12 03 09.672	0.08	2	71.701	-16 14 31.98	0.02	2	71.701				10762
11709	-22	3282	8.0	K2	03 14.752	0.11	3	69.835	-23 30 10.25	0.18	4	69.692				10763
11710	- 1	2618	8.5	F0	03 20.903	0.10	2	71.598	- 2 11 05.46	0.21	2	71.598				10764
11711	-35	7694	6.26	B9	03 22.013	0.03	42	71.100	-35 24 56.16	0.04	42	71.100	1312	16528	2801	31312
11712	-54	4958	8.3	K2	03 23.757	0.15	4	69.280	-54 45 54.30	0.13	4	69.280				10765

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
11713	- 2	3460	6.47	K0	12 03 26.029	0.08	6	70.376	- 2 51 11.35	0.10	6	70.376	2967	16530	2802	32967
11714	-12	3561	8.3	K5	03 26.709	0.04	2	70.676	-13 02 18.37	0.17	2	70.676				10766
11715	-29	9547	8.7	G5	03 34.107	0.15	4	69.761	-29 54 42.51	0.16	4	69.761				10767
11716	-55	4843	8.0	K0	03 36.128	0.08	4	69.763	-55 52 46.18	0.11	4	69.763				10768
11717	-43	7476	8.0	K2	03 39.825	0.09	4	70.011	-44 14 01.12	0.13	4	70.011				1439
11718	-21	3473	7.32	K0	12 03 42.108	0.09	4	70.229	-22 31 05.24	0.14	4	70.229		16541		10769
11719	-25	9035	8.4	K0	03 46.899	0.14	4	70.066	-26 07 13.28	0.18	4	70.066				10770
11720	-86	244	9.2	K0	04 00.009	0.15	4	69.758	-86 28 54.43	0.18	4	69.758				19483
11720 SP					03 59.532	0.20	4	71.154	-86 28 54.04	0.37	4	71.154				19483
11721	-19	3408	8.3	K0	04 01.510	0.19	4	70.732	-20 27 29.28	0.09	4	70.732				10771
11722	-59	4054	8.3	K2	12 04 09.365	0.09	4	69.724	-59 28 31.37	0.11	4	69.724				10772
11723	- 8	3288	8.6	F5	04 09.540	0.13	2	71.698	- 9 07 53.91	0.16	2	71.698				10773
11724	-79	674	9.2	K0	04 11.666	0.16	5	70.801	-79 26 34.54	0.11	5	70.801				19484
11724 SP					04 11.610	0.31	4	71.213	-79 26 33.92	0.25	4	71.213				19484
11725	-10	3402	8.9	G5	04 12.118	0.10	2	71.788	-11 24 14.54	0.38	2	71.788				10774
11726	-11	3238	6.70	F0	12 04 13.399	0.04	4	71.750	-11 57 45.04	0.13	4	71.750	2968	16549	2806	10775
11727	-63	2145	4.30	F0	04 15.594	0.08	6	69.728	-64 20 06.04	0.10	6	69.728	2969	16551	2807	32969
11728	-28	9297	8.3	G5	04 19.267	0.13	4	69.778	-28 50 51.64	0.23	4	69.778				10776
11729	-78	727	7.68	A2	04 23.801	0.09	4	70.226	-78 27 45.73	0.12	4	70.226		16553		19485
11729 SP					04 23.755	0.22	4	70.273	-78 27 45.58	0.29	4	70.273		16553		19485
11730	- 4	3207	8.7	K0	12 04 24.527	0.02	2	71.807	- 4 47 15.08	0.29	2	71.807				10777
11731	-18	3324	8.5	G0	04 27.999	0.18	2	71.793	-19 15 06.61	0.12	2	71.793				10778
11732	+ 0	2894	7.73	K0	04 37.686	0.11	2	71.728	- 0 21 05.93	0.21	2	71.728			2809	10779
11733	-51	6376	8.9	K0	04 37.777	0.16	4	69.804	-52 03 28.44	0.08	4	69.804				1440
11734	- 5	3423	7.8	K2	04 39.295	0.06	2	69.841	- 5 48 21.31	0.04	2	69.841				10780
11735	-56	5022	8.2	K2	12 04 42.141	0.16	4	70.238	-57 17 08.39	0.14	4	70.238				10781
11736	-65	1791	9.0	F2	04 48.213	0.11	4	69.806	-65 37 16.30	0.14	3	69.315				19486
11737	-23	10381	8.5	K0	04 54.383	0.15	4	70.102	-23 51 42.93	0.15	4	70.102				10782
11738	+ 5	2587	7.9	K0	04 59.251	0.08	2	70.736	+ 4 47 29.63	0.04	2	70.736		16566		10783
11739	-30	9687	6.82	F8	05 00.673	0.12	6	69.832	-31 07 52.84	0.08	6	69.832	2970	16567		32970
11740	-14	3460	8.4	K0	12 05 02.063	0.01	2	69.684	-14 34 52.30	0.04	2	69.684				10784
11741	+ 1	2655	9.0	K2	05 04.093	0.33	2	70.671	+ 0 59 12.91	0.12	2	70.671				10785
11742	-74	880	5.16	K0	05 09.653	0.15	6	69.747	-75 05 19.88	0.13	6	69.747	2971	16572		32971
11742 SP					05 09.593	0.21	6	69.199	-75 05 19.47	0.39	6	69.199	2971	16572		52971
11743	- 7	3345	7.44	F5	05 13.340	0.09	3	72.236	- 8 12 27.60	0.03	2	72.274		16573		10786
11744	- 2	3466	8.3	F8	12 05 15.195	0.22	2	72.238	- 2 51 07.45	0.36	2	72.238				10787
11745	-49	6810	7.5	K0	05 16.455	0.11	4	69.759	-49 41 39.23	0.20	4	69.759				1441
11746	-45	7554	9.3	G5	05 20.769	0.13	5	70.665	-45 38 49.54	0.09	4	70.516				1442
11747	-44	7799	8.4	K5	05 25.160	0.05	4	70.204	-44 32 27.97	0.13	4	70.204				1443
11748	-16	3394	8.8	K2	05 25.161	0.10	2	71.803	-17 13 05.50	0.13	2	71.803				10788
11749	+ 1	2656	7.14	F2	12 05 26.868	0.05	2	71.268	+ 0 53 58.86	0.01	2	71.268		16574		10789
11750	-49	6813	4.81	B5	05 29.155	0.10	7	71.187	-50 22 58.44	0.10	7	71.187		16576	2810	21041
11751	-41	6989	8.2	K0	05 33.797	0.06	4	70.188	-41 31 50.24	0.18	4	70.188				1444
11752	- 3	3239	7.2	K0	05 38.561	0.02	2	71.747	- 4 00 31.67	0.02	2	71.747				10790
11753	-47	7396	5.58	A0	05 38.717	0.05	6	70.655	-48 24 50.98	0.12	6	70.655		16581		21042
11754	-51	6391	8.9	G5	12 05 41.283	0.23	4	70.558	-52 18 43.87	0.16	4	70.558				10791
11755	-50	6697	2.88	B3p	05 45.347	0.02	152	71.068	-50 26 38.58	0.03	147	71.062	452	16584	2812	30452
11756	-30	9698	9.1	G0	05 46.587	0.12	4	69.720	-30 41 05.72	0.15	4	69.720				10792
11757	-39	7480	8.4	K5	05 50.468	0.13	4	70.237	-39 26 20.72	0.09	4	70.237				10793
11758	-21	3482	8.5	M1	05 52.468	0.05	3	70.651	-22 22 36.03	0.15	4	70.304				10794
11759	-61	2972	9.0	A0	12 05 55.986	0.32	5	71.098	-62 05 25.79	0.23	4	70.838				10795
11760	-50	6702	9.2	K0	06 00.580	0.08	4	69.859	-50 46 14.97	0.20	4	69.859				1445
11761	- 6	3509	8.6	K2	06 01.224	0.25	2	70.724	- 6 34 33.99	0.34	2	70.724				10796
11762	-37	7681	8.8	K0	06 03.410	0.14	4	70.028	-37 27 40.16	0.19	4	70.028				10797
11763	+ 3	2603	8.5	K2	06 08.247	0.39	2	71.815	+ 3 23 13.25	0.44	2	71.815		16591		10798
11764	-17	3562	8.0	F2	12 06 08.624	0.19	2	71.747	-18 09 25.70	0.03	2	71.747				10799
11765	-47	7404	9.0	K5	06 10.260	0.12	4	70.568	-48 06 13.76	0.20	4	70.568				1446
11766	-29	9572	8.7	F8	06 14.213	0.18	4	70.192	-29 57 22.83	0.11	4	70.192				10800
11767	-34	7941	9.0	K0	06 17.372	0.07	4	70.715	-34 35 09.83	0.11	4	70.715				10801
11768	-75	785	9.1	F5	06 28.174	0.09	4	69.177	-76 21 33.22	0.13	4	69.177				19487
11768 SP					12 06 28.060	0.20	4	69.799	-76 21 32.71	0.27	4	69.799				19487
11769	-35	7742	9.3	K2	06 42.234	0.05	4	70.780	-35 37 49.16	0.13	4	70.780				10802
11770	-59	4080	7.36	B5	06 45.819	0.11	7	71.353	-59 29 27.83	0.10	7	71.353		16598		21043
11771	-23	10397	8.8	F8	06 46.470	0.11	4	69.895	-23 30 31.51	0.61	4	69.895				10803
11772	-12	3569	8.4	K0	06 47.850	0.07	2	71.729	-12 39 42.12	0.31	2	71.729				10804
11773	+ 3	2605	8.7	K0	12 06 48.164	0.07	2	71.734	+ 3 23 05.44	-	1	72.192		16599		10805
11774	-38	7540	8.7	K2	06 48.988	0.13	5	70.690	-38 27 05.61	0.13	5	70.690				10806
11775	-20	3582	8.4	A2	06 57.349	0.16	4	70.075	-20 46 29.63	0.42	4	70.075				10807
11776	- 7	3354	9.0	K2	07 05.226	0.21	2	70.812	- 8 16 53.24	0.11	2	70.812				10808
11777	+ 2	2517	6.13	K0	07 07.551	0.04	7	70.495	+ 2 10 39.16	0.09	6	70.368	2972	16608	2814	32972
11778	- 4	3219	7.21	F2	12 07 13.835	0.19	3	71.540	- 4 56 51.40	0.16	3	71.540		16611		10809
11779	-15	3425	8.4	K2	07 28.677	0.07	2	71.188	-16 13 47.88	0.08	3	71.253				10810
11780	+ 6	2559	5.74	F0	07 30.260	0.28	5	70.506	+ 6 05 05.71	0.11	5	70.506	2973	16616	2816	32973
11781	-16	3403	6.64	F5	07 31.400	0.09	2	70.865	-17 15 31.95	0.05	2	70.865		16617		10811
11782	-47	7424	9.4	G5	07 31.813	0.11	4	70.140	-48 19 26.45	0.14	4	70.140				1447

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	PK4	GC	N30	No*
11783	-21 3487	3.21	K0	12 07 32.804	0.02	118	71.063	-22 20 30.00	0.02	114	71.025	453	16618	2817	80453
11784	-42 7460	8.8	K5	07 39.537	0.18	4	69.720	-43 08 53.93	0.08	4	69.720				1448
11785	-36 7677	8.6	K0	07 40.367	0.09	4	69.764	-36 54 58.41	0.31	4	69.764				10812
11786	-18 3337	7.7	K5	07 44.139	0.10	2	71.389	-19 29 29.94	0.07	2	71.389				10813
11787	-13 3495	8.2	G0	07 50.458	0.00	2	70.810	-13 54 03.55	0.20	2	70.810				10814
11788	-1 2627	9.0	F0	12 07 52.339	0.07	2	70.740	-2 04 37.43	0.05	2	70.740				10815
11789	-24 10187	7.56	A0	07 53.636	0.06	4	70.258	-24 40 50.39	0.09	4	70.258		16622		10816
11790	-37 7714	6.08	A2	07 57.845	0.06	6	70.801	-37 35 30.85	0.06	6	70.801	2974	16624		32974
11791	+17 2446	6.34	A0	07 58.717	0.03	23	72.035	+17 05 14.53	0.05	23	72.035	1313	16625	2818	31313
11792	-45 7592	8.5	K0	08 03.337	0.12	4	69.689	-46 15 03.69	0.10	4	69.689				1449
11793	-8 3294	8.2	K0	12 08 07.093	0.04	2	70.658	-9 07 25.40	0.16	2	70.658				10817
11794	-27 8539	7.35	K0	08 17.087	0.09	4	71.013	-27 47 22.27	0.17	5	70.662		16632		10818
11795	-9 3452	8.9	A2	08 35.142	0.13	2	71.696	-10 25 44.76	0.39	2	71.696				10819
11796	-11 3251	8.4	F2	08 39.940	0.16	2	70.839	-11 49 08.52	0.05	2	70.839				10820
11797	-5 3444	8.18	G0	08 44.351	0.04	2	70.662	-5 38 49.55	0.36	2	70.662		16640		10821
11798	-67 1918	9.2	F5	12 08 45.875	0.07	4	68.747	-67 30 38.55	0.15	4	68.747				19488
11799	-31 9534	8.4	G5	08 45.931	0.13	4	69.699	-32 21 16.79	0.13	4	69.699				10822
11800	-2 3478	6.92	F5	08 48.042	0.26	2	71.698	-3 30 01.14	0.37	2	71.698		16643		10823
11801	-56 5077	8.5	K5	08 50.576	0.16	4	69.234	-56 30 34.66	0.07	4	69.234				10824
11802	-43 7524	6.60	F5	08 51.553	0.13	6	68.653	-44 00 15.74	0.08	6	68.653	2975	16645	2821	32975
11803	+0 2907	7.74	K0	12 08 51.695	0.00	2	70.777	+0 28 18.44	0.27	2	70.777			2822	10825
11804	-32 8551	7.8	K2	08 53.921	0.15	4	69.716	-33 20 30.62	0.27	4	69.716				10826
11805	+3 2611	8.9	K0	08 59.094	0.16	2	71.679	+2 53 09.90	0.02	2	71.679				10827
11806	-51 6455	4.20	B3	09 01.585	0.04	6	70.733	-52 05 24.77	0.10	6	70.733		16651		21044
11807	-21 3490	8.3	M1	09 01.717	0.08	4	69.774	-21 50 59.32	0.08	4	69.774				10828
11808	-46 7751	8.2	K0	12 09 03.492	0.08	4	69.770	-46 57 42.79	0.09	4	69.770				1450
11809	-52 5317	7.8	K2	09 10.598	0.09	4	69.725	-52 48 54.33	0.15	4	69.725				10829
11810	-28 9356	8.5	F5	09 11.248	0.09	4	70.627	-29 07 09.20	0.14	4	70.627				10830
11811	-74 884	8.3	K2	09 11.910	0.20	4	69.715	-74 28 46.48	0.11	4	69.715				19489
11812	-66 1713	9.1	K0	09 14.379	0.11	4	69.850	-66 25 02.79	0.21	4	69.850				19490
11813	-17 3569	8.7	K0	12 09 16.323	0.26	2	69.867	-18 30 36.33	0.01	2	69.867				10831
11814	+26 2316	5.81	K0	09 19.001	0.05	6	69.849	+26 08 54.93	0.20	6	69.849	2976	16659	2823	32976
11815	-62 2619	7.62	F2	09 20.047	0.10	4	70.200	-63 06 08.77	0.12	4	70.200		16660		10832
11816	-25 9091	7.40	K0	09 23.743	0.19	4	70.216	-25 39 48.01	0.16	4	70.216			2824	10833
11817	-53 4986	8.6	A5	09 33.971	0.18	4	69.708	-53 57 08.25	0.08	3	69.185				10834
11818	+1 2666	8.9	K0	12 09 34.238	0.05	2	70.406	+1 26 52.41	0.26	2	70.406				10835
11819	+21 2398	5.67	G5	09 36.745	0.13	6	70.159	+20 49 12.75	0.11	6	70.159	2977	16667		32977
11820	-3 3249	7.9	K2	09 40.218	0.03	2	70.694	-4 07 25.57	0.07	2	70.694			2825	10836
11821	-6 3524	8.6	K2	09 40.712	0.04	2	71.567	-6 43 22.91	0.03	2	71.567				10837
11822	-58 4159	7.8	K2	09 41.971	0.14	4	70.436	-59 14 15.23	0.13	4	70.436				10838
11823	-72 1218	9.8	K0	12 09 43.163	0.21	4	71.291	-72 57 35.61	0.12	3	70.662				19491
11824	-31 9548	9.0	K0	09 48.163	0.08	4	70.569	-31 48 01.60	0.26	4	70.569				10839
11825	-22 3309	9.1	G0	09 48.924	0.12	3	69.506	-22 34 55.69	1.04	4	69.999				10840
11826	-10 3420	8.2	K2	09 50.359	0.23	2	71.393	-11 22 51.65	0.06	2	71.393				10841
11827	-43 7533	8.3	K0	09 50.397	0.17	4	69.623	-43 43 16.79	0.12	4	69.623				1451
11828	-14 3476	8.6	F5	12 09 55.423	0.19	2	70.705	-15 10 46.82	0.03	2	70.705				10842
11829	+4 2585	8.1	F5	09 56.510	0.22	2	71.703	+3 40 54.90	0.02	2	71.703				10843
11830	-1 2635	7.42	K5	10 08.222	0.10	2	71.679	-2 11 39.77	0.15	2	71.679		16680	2828	10844
11831	-61 3019	8.3	K0	10 09.558	0.19	4	69.823	-61 37 11.57	0.20	4	69.823				10845
11832	-36 7706	7.59	K2	10 11.673	0.03	4	69.690	-37 14 56.58	0.06	4	69.690		16681		10846
11833	-54 5048	9.0	K0	12 10 13.172	0.11	4	70.658	-54 44 47.11	0.10	4	70.658				10847
11834	-44 7861	8.5	G5	10 15.828	0.30	4	69.786	-44 36 50.70	0.04	4	69.786				1452
11835	-24 10214	9.0	A2	10 17.519	0.12	4	69.794	-24 33 00.42	0.15	4	69.794				10848
11836	-16 3415	8.8	K2	10 22.725	0.25	2	71.744	-16 51 27.45	0.28	2	71.744				10849
11837	-72 1223	8.7	K5	10 24.810	0.08	5	71.256	-73 22 02.49	0.15	5	71.256				19492
11838	-60 3832	8.1	G5	12 10 27.504	0.06	4	70.660	-60 47 45.66	0.02	4	70.660				10850
11839	-41 7031	8.8	F5	10 36.485	0.10	5	70.275	-41 31 28.94	0.07	4	70.229				1453
11840	-82 503	8.3	K5	10 36.536	0.14	5	70.435	-82 27 32.38	0.10	5	70.435				19493
11840	SP			10 36.676	0.19	4	70.251	-82 27 31.91	0.44	4	70.251				19493
11841	-34 7995	9.3	A0	10 37.127	0.18	5	70.672	-35 05 19.85	0.18	5	70.672				18451
11842	-48 7247	8.0	K2	12 10 41.615	0.07	4	70.257	-48 56 15.68	0.06	4	70.257				1454
11843	+11 2440	5.81	A2	10 53.030	0.09	6	69.702	+10 32 25.26	0.09	6	69.702	2978	16693	2829	32978
11844	-38 7586	9.0	K0	11 01.688	0.15	4	70.478	-38 31 15.41	0.09	4	70.478				10851
11845	-20 3600	8.7	K5	11 01.956	0.10	4	69.657	-21 21 24.05	0.13	4	69.657		16697		10852
11846	-8 3303	7.0	G5	11 03.117	0.28	2	71.729	-9 14 06.11	0.12	2	71.729				10853
11847	-45 7627	8.8	K0	12 11 14.188	0.12	4	70.523	-45 48 32.31	0.08	4	70.523				1455
11848	-15 3435	8.8	K0	11 16.449	0.08	3	71.916	-15 41 54.31	0.16	2	71.796				10854
11849	+0 2911	8.5	K2	11 19.086	0.03	3	71.225	-0 21 40.23	0.33	2	70.763				10855
11850	+3 2616	7.03	G5	11 22.352	0.04	3	71.210	+2 32 18.04	0.06	2	70.745		16701		10856
11851	-36 7721	8.6	K2	11 23.978	0.12	4	70.324	-36 38 09.39	0.12	4	70.324				10857
11852	-67 1920	8.9	K5	12 11 24.872	0.12	4	69.319	-68 21 15.03	0.13	4	69.319				19494
11853	-50 6809	8.5	K2	11 41.663	0.24	4	70.264	-50 47 33.34	0.11	4	70.264				1456
11854	-39 7533	9.0	K0	11 48.733	0.18	4	70.505	-39 26 47.48	0.17	4	70.505				10858
11855	-12 3589	8.5	F8	11 51.469	0.34	2	71.270	-12 44 08.93	0.03	2	71.270				10859
11856	-32 8586	8.5	K0	11 53.420	0.11	4	70.220	-33 24 08.22	0.10	4	70.220				10860

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
11857	-19	3441	8.5	G0	12 11 54.168	0.15	3	71.507	-19 49 46.51	0.12	3	71.507				10861
11858	+5	2601	8.8	F0	11 57.529	0.07	2	71.756	+4 33 27.31	0.35	2	71.756				10862
11859	-29	9628	8.5	K5	12 04.564	0.15	4	69.782	-30 00 41.02	0.08	4	69.782				10863
11860	-47	7479	9.1	K0	12 06.783	0.05	4	70.278	-48 14 38.08	0.07	4	70.278				1457
11861	-56	5113	7.9	G0	12 06.850	0.07	4	69.801	-56 30 03.76	0.07	4	69.801				10864
11862	-24	10236	7.48	K0	12 12 07.200	0.15	4	70.120	-24 29 49.02	0.06	4	70.120	16720			10865
11863	-49	6923	8.5	K2	12 10.088	0.11	4	69.783	-49 30 31.73	0.14	4	69.783				1458
11864	-9	3467	8.8	K2	12 17.439	0.14	3	71.959	-10 07 21.05	0.24	2	71.857				10866
11865	-7	3373	8.8	F0	12 22.606	0.11	2	71.188	-8 20 40.08	0.03	2	71.188				10867
11866	-0	2554	7.8	K0	12 26.253	0.25	2	71.761	-1 02 55.54	0.12	2	71.761				10868
11867	+0	2914	8.7	K0	12 26.475	0.01	2	72.208	-0 22 58.70	0.07	2	72.208				10869
11868	-58	4189	3.08	B3	12 28.480	0.04	36	70.522	-58 28 15.27	0.04	36	70.522	455	16724	2833	30455
11869	-62	2646	7.9	G5	12 35.584	0.07	4	70.201	-62 36 35.17	0.28	3	69.842				10870
11870	-62	2648	8.4	G5	12 36.844	0.11	4	70.250	-63 08 49.51	0.09	4	70.250				10871
11871	-51	6512	8.5	K5	12 37.404	0.03	2	71.154	-51 27 40.22	0.17	2	71.154				1459
11872	-63	2211	8.4	K0	12 40.605	0.07	4	70.324	-64 17 49.73	0.08	4	70.324				19495
11873	+5	2602	8.3	K0	12 40.704	0.10	2	71.781	+4 48 11.86	0.14	2	71.781				10872
11874	-41	7052	8.6	K2	12 43.680	0.19	4	69.708	-42 15 46.64	0.04	4	69.708				1460
11875*	-80	646	8.0	A0	12 45.940	0.10	4	69.733	-80 30 24.56	0.13	4	69.733				19496
11875 SP					12 46.043	0.17	4	69.748	-80 30 24.17	0.29	4	69.748				19496
11876p	-58	4192	8.3	G5	12 52.518	0.12	4	70.692	-58 54 16.89	0.10	4	70.692				10873
11877	-26	9051	8.5	F0	12 52.744	0.03	4	70.370	-27 21 09.59	0.10	4	70.370				10874
11878	-67	1925	8.1	K0	12 52.899	0.09	5	70.886	-67 37 00.92	0.09	5	70.886				19497
11879	-13	3508	7.56	K0	12 55.882	0.06	3	71.821	-13 47 38.65	0.20	2	71.663				10875
11880	-16	3424	2.78	B8	13 13.596	0.03	69	71.567	-17 15 51.30	0.04	68	71.558	457	16740	2837	30457
11881	-55	4953	8.1	K0	13 16.786	0.14	6	71.073	-55 25 50.99	0.15	5	71.421				10876
11882	-31	9587	8.7	K0	13 21.340	0.14	4	70.257	-31 29 31.60	0.07	4	70.257				10877
11883	-30	9796	8.6	K0	13 22.498	0.11	4	70.319	-30 49 58.18	0.08	4	70.319				10878
11884	-25	9131	8.4	F5	13 24.132	0.18	4	70.718	-26 17 11.61	0.15	4	70.718				10879
11885	-70	1475	8.4	G5	13 26.608	0.08	4	69.780	-70 32 55.97	0.07	4	69.780				19498
11886	+15	2436	5.08	A2	13 27.742	0.07	6	70.692	+15 10 37.46	0.15	6	70.692	2981	16747		32981
11887*	-40	7193	9.0	G5	13 28.607	0.12	4	69.647	-40 41 05.18	0.06	4	69.647				1461
11888	-11	3268	8.0	K2	13 39.391	0.18	2	70.669	-11 44 34.17	0.29	2	70.669				10880
11889	-3	3257	8.2	K0	13 42.126	0.11	2	70.670	-4 10 25.96	0.02	2	70.670				10881
11890	-60	3873	8.2	K0	13 45.695	0.11	5	70.246	-61 21 19.18	0.14	5	70.246				10882
11891	-6	3538	7.6	K0	13 47.312	0.09	2	71.311	-7 15 14.54	0.28	2	71.311				10883
11892	-5	3465	8.1	K2	13 48.230	0.01	2	71.386	-5 34 04.41	0.15	2	71.386				10884
11893	+24	2443	5.06	K0	13 48.797	0.11	6	70.103	+24 13 23.55	0.15	6	70.103	2982	16752	2841	32982
11894	-9	3473	8.5	K2	14 02.473	0.18	2	70.384	-9 46 31.58	0.19	2	70.384				10885
11895	-24	10253	8.5	K5	14 08.029	0.14	4	69.638	-24 59 31.15	0.14	4	69.638				10886
11896	-1	2639	8.0	K0	14 10.144	0.11	2	70.702	-2 27 42.17	0.31	2	70.702				10887
11897	-83	451	8.5	F5	14 16.110	0.13	4	69.267	-84 00 46.59	0.29	4	69.267				19499
11897 SP					14 15.950	0.19	4	70.422	-84 00 45.64	0.38	4	70.422				19499
11898	-31	9596	8.3	K5	14 18.809	0.23	4	69.622	-32 04 25.18	0.10	4	69.622				10888
11899	-76	724	9.0	M0	14 22.932	0.09	5	70.425	-77 22 09.08	0.19	5	70.425				19500
11899 SP					14 23.008	0.48	4	70.503	-77 22 07.54	0.59	4	70.503				19500
11900	+1	2676	8.2	K0	14 24.700	0.24	2	70.727	+0 37 47.50	0.53	2	70.727				10889
11901	+2	2525	8.8	A2	14 34.027	0.55	2	70.865	+1 59 24.86	0.10	2	70.865				10890
11902	-14	3484	9.2	A2	14 37.713	0.07	2	71.375	-14 57 29.49	0.39	2	71.375				10891
11903	-66	1732	8.9	G0	14 52.006	0.08	4	69.189	-66 41 26.67	0.10	4	69.189				19501
11904	-33	8315	8.5	M0	14 52.680	0.08	4	69.673	-34 13 38.33	0.14	4	69.673				10892
11905	-17	3592	9.0	K2	14 54.696	0.02	2	69.677	-17 58 45.82	0.07	2	69.677				10893
11906	-21	3504	8.6	K2	15 04.202	0.20	4	69.701	-21 40 37.81	0.23	4	69.701				10894
11907	-35	7843	7.9	K2	15 08.997	0.19	4	69.696	-36 03 22.94	0.12	4	69.696				10895
11908	-27	8608	7.8	K0	15 10.715	0.09	3	69.828	-27 59 36.49	0.07	4	69.686				10896
11909	-69	1652	7.8	K2	15 11.140	0.06	4	70.173	-69 39 55.09	0.11	4	70.173				19502
11910	-5	3468	8.2	F8	15 19.281	0.10	3	71.615	-6 09 11.50	0.12	3	71.615				10897
11911f	-23	10471	6.85	B9	15 19.643	0.10	4	69.296	-23 44 08.78	0.20	4	69.296				10898
11912	-78	741	4.38	B5	15 21.808	0.02	130	71.033	-79 02 04.70	0.03	127	71.027	459	16774	2844	30459
11912 SP					15 21.802	0.06	59	71.306	-79 02 04.78	0.09	57	71.319	459	16775	2844	30459
11913p	-59	4164	8.8	G5	15 22.344	0.13	4	69.288	-60 23 49.48	0.10	4	69.288				10899
11914	+2	2526	7.9	A2	15 23.975	0.02	2	69.800	+1 51 10.47	0.07	2	69.800				10900
11915	-64	1852	8.4	K0	15 26.196	0.09	4	69.780	-65 23 06.40	0.16	4	69.780	16776			19503
11916	-1	2645	8.4	K0	15 29.084	0.05	2	71.332	-1 32 47.01	0.00	2	71.332				10901
11917	-50	6874	7.53	K2	15 40.207	0.10	4	69.860	-50 58 02.34	0.13	4	69.860	16783			1462
11918	-63	2235	4.26	B3	15 42.479	0.14	6	70.824	-63 43 31.38	0.15	6	70.824	16785			21045
11919	-57	5391	7.7	K0	15 44.546	0.16	4	69.997	-57 54 06.42	0.16	4	69.997				10902
11920	-38	7629	7.8	K0	15 44.641	0.12	4	69.650	-38 59 37.45	0.19	4	69.650				10903
11921	+3	2626	8.2	A2	15 45.637	0.43	2	70.740	+3 22 43.63	0.02	2	70.740				10904
11922	-20	3619	7.8	M0	15 51.029	0.11	4	69.803	-20 31 55.49	0.08	4	69.803				10905
11923	-38	7635	7.5	G5	15 59.210	0.11	4	69.718	-39 08 27.45	0.04	4	69.718				10906
11924	-2	3494	8.3	K2	16 00.417	0.20	2	70.393	-2 44 40.70	0.10	2	70.393				10907
11925	-57	5395	8.8	K0	16 01.293	0.14	5	70.819	-58 20 11.90	0.13	4	71.190				10908
11926	-23	10477	8.8	K2	16 01.689	0.17	4	69.367	-23 51 13.89	0.10	4	69.367				10909
11927	-55	4986	8.8	K0	16 06.961	0.09	5	71.226	-55 29 39.45	0.22	5	71.226				10910

11875 8.5m-9.1m, 0°4, 317°.

11876 SDS, 10.3m, 2°7, 168°.

11887 SDS, 9.3m-9.4m, 0°8, 240°.

11911 A 8503, 10.4m, 3°3, 219°.

11913 SDS, 10.9m, 2°0, 71°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
11928	-29	9658	7.9	F8	12	16	11.530	0.11	4	70.218	-29 40' 58.84	0.12	4	70.218					10911
11929	-31	9618	9.1	K2		16	13.771	0.19	4	70.567	-31 50' 15.17	0.20	4	70.567					10912
11930	-59	4172	7.7	K0		16	16.748	0.08	4	70.671	-59 55' 30.64	0.24	4	70.671					10913
11931	-45	7676	9.0	G5		16	17.434	0.14	4	70.291	-45 36' 12.85	0.13	4	70.291					1463
11932	-54	5113	4.98	M0		16	18.906	0.07	6	69.438	-54 51' 55.11	0.08	6	69.438	2985	16792			32985
11933	-32	8626	7.7	K0	12	16	22.498	0.20	4	70.169	-33 00' 52.97	0.16	4	70.169					10914
11934	-71	1325	8.9	K0		16	24.832	0.09	5	70.641	-71 38' 22.66	0.21	4	70.267					19504
11935	-12	3603	6.9	A2		16	25.792	0.08	2	71.690	-13 15' 52.46	0.01	2	71.690					10915
11936	-22	3337	9.11	K5		16	25.956	0.09	4	69.766	-22 36' 38.68	0.14	4	69.766		16793			10916
11937	+ 1	2681	8.1	K0		16	27.334	0.16	2	71.699	+ 1 26' 36.24	0.30	2	71.699					10917
11938	- 1	2646	9.0	K2	12	16	33.571	0.18	2	71.702	- 1 45' 45.44	0.12	2	71.702					10918
11939	-15	3450	8.3	K0		16	43.615	0.22	2	70.848	-15 59' 47.03	0.03	2	70.848					10919
11940	- 8	3323	7.03	K0		16	45.617	0.04	24	71.423	- 8 38' 13.07	0.05	21	71.317	1315	16798	2848		31315
11941	-31	9625	7.33	A2		16	55.034	0.07	4	69.794	-32 18' 40.57	0.18	4	69.794		16803			10920
11942	-18	3368	7.2	M4		17	07.043	0.16	2	70.680	-18 55' 17.37	0.28	2	70.680					10921
11943	-18	3369	7.8	K0	12	17	20.119	0.04	2	71.742	-18 59' 49.87	0.29	2	71.742					10922
11944	+ 0	2926	4.00	A0		17	20.654	0.03	29	71.906	- 0 23' 21.18	0.06	29	71.906	460	16813	2851		30460
11945	-14	3493	8.1	K0		17	22.056	0.17	2	71.670	-14 47' 06.65	-	1	72.064		16815			10923
11946	-41	7116	8.74	K0		17	23.839	0.09	4	69.708	-41 40' 04.30	0.16	4	69.708		16817			1464
11947	-28	9421	8.0	K5		17	23.873	0.08	3	69.168	-28 45' 23.72	0.19	4	69.191					10924
11948	-48	7348	9.0	K0	12	17	24.953	0.08	5	69.891	-48 31' 28.96	0.08	4	69.748					1465
11949	- 7	3388	8.5	F5		17	29.589	0.05	2	70.873	- 7 50' 54.59	0.10	2	70.873					10925
11950	-52	5481	8.3	K2		17	34.065	0.04	4	70.132	-53 06' 39.18	0.12	4	70.132					10926
11951	- 9	3483	8.4	A2		17	38.351	0.07	3	71.039	-10 31' 06.87	0.04	2	70.873					10927
11952	-35	7870	8.1	K5		17	38.566	0.14	4	70.197	-36 21' 15.85	0.11	4	70.197					10928
11953	- 3	3267	7.3	K0	12	17	42.680	0.19	2	69.773	- 3 13' 58.15	0.02	2	69.773					10929
11954	+ 4	2604	5.10	K0		17	48.117	0.02	117	71.113	+ 3 35' 25.69	0.03	116	71.104	1317	16828	2854		81317
11955	-42	7566	9.0	K0		17	48.836	0.08	4	70.467	-42 41' 44.07	0.16	4	70.467					1466
11956	- 5	3476	8.7	A0		17	49.762	0.25	3	72.119	- 6 16' 46.64	0.33	3	72.119					10930
11957	-35	7875	8.9	K0		17	56.718	0.10	4	70.485	-35 45' 07.57	0.19	4	70.485					10931
11958	-34	8087	9.2	G5	12	17	58.299	0.04	4	70.528	-34 57' 14.97	0.23	4	70.528					10932
11959	+18	2592	4.91	K0		18	11.318	0.11	6	69.873	+18 04' 09.99	0.16	6	69.873	2987	16835			32987
11960	-54	5132	9.0	K0		18	15.264	0.11	4	68.716	-54 44' 39.20	0.15	4	68.716					10933
11961	-12	3613	8.6	M3		18	15.997	0.23	2	70.695	-12 34' 33.93	0.07	2	70.695					10934
11962	-12	3614	5.36	K0		18	20.604	0.08	6	69.129	-13 17' 18.33	0.10	6	69.129	2988	16841			32988
11963	-44	7948	9.0	K0	12	18	30.763	0.10	4	70.211	-44 43' 33.64	0.11	4	70.211					1467
11964	-49	7017	9.0	K0		18	31.206	0.14	4	70.691	-49 39' 06.51	0.05	4	70.691					1468
11965	-47	7557	8.8	F0		18	31.629	0.16	4	70.265	-47 46' 40.51	0.15	4	70.265					1469
11966	-10	3452	8.1	A0		18	33.561	0.18	2	70.763	-11 11' 53.79	0.17	2	70.763		16845			10935
11967	-59	4188	3.57	K2		18	38.383	0.07	6	68.822	-60 07' 28.31	0.10	6	68.822	2989	16849			32989
11968	-26	9098	7.6	K2	12	18	39.630	0.08	4	68.761	-26 27' 18.40	0.08	4	68.761					10936
11969	+ 4	2606	8.7	F2		18	40.862	0.30	2	71.411	+ 3 59' 06.58	0.01	2	71.411					10937
11970	-68	1642	7.6	G0		18	46.202	0.15	5	69.647	-68 49' 58.83	0.13	4	69.725					19505
11971	-46	7869	8.8	G5		18	48.067	0.11	4	70.253	-46 59' 30.70	0.06	4	70.253					1470
11972	-82	510	8.9	G0		18	48.733	0.11	4	69.312	-83 02' 33.20	0.09	4	69.312					19506
11972 SP					12	18	48.823	0.11	4	70.279	-83 02' 33.45	0.36	4	70.279					19506
11973	+ 3	2635	8.7	K0		18	51.394	0.23	2	71.706	+ 3 00' 20.51	0.19	2	71.706		16852			10938
11974	-29	9686	8.5	M0		18	52.674	0.15	4	68.850	-30 12' 27.73	0.20	4	68.850					10939
11975	-50	6919	8.5	K0		19	01.474	0.22	4	69.785	-51 15' 25.19	0.11	4	69.785					1471
11976	+ 0	2932	8.4	K2		19	04.117	0.07	2	71.414	+ 0 07' 09.94	0.27	2	71.414					10940
11977	-56	5194	8.60	F0	12	19	13.361	0.12	4	69.329	-56 46' 17.55	0.16	3	68.680		16855			10941
11978	-17	3602	8.7	F5		19	16.435	0.43	2	71.403	-18 07' 23.18	0.30	2	71.403					10942
11979	- 3	3271	7.7	K5		19	16.912	0.04	2	70.668	- 4 06' 31.80	0.08	2	70.668					10943
11980	-66	1747	5.26	A5		19	19.251	0.11	6	69.049	-67 14' 41.13	0.11	6	69.049	2990	16857	2857		32990
11981	- 7	3398	8.7	K5		19	29.573	0.04	2	70.895	- 8 16' 49.92	0.39	2	70.895					10944
11982	-34	8100	6.98	K0	12	19	30.639	0.14	4	69.726	-35 14' 05.21	0.17	4	69.726		16864			10945
11983	-37	7842	7.43	K0		19	36.249	0.11	4	69.703	-36 10' 26.78	0.10	4	69.703		16865			10946
11984	+26	2337	4.78	F5		19	59.591	0.03	90	71.132	+26 07' 23.92	0.05	89	71.087	1318	16873	2859		81318
11985	-43	7633	9.0	G5		20	05.306	0.18	5	69.663	-44 06' 12.87	0.08	4	69.726					1472
11986	-27	8641	8.7	K0		20	05.841	0.09	4	69.245	-27 29' 05.40	0.14	4	69.245					10947
11987	-56	5202	5.59	B8	12	20	05.970	0.09	7	70.969	-57 23' 55.77	0.07	7	70.969		16877	2860		21046
11988	-12	3623	8.8	K0		20	10.671	0.03	2	69.721	-12 50' 17.62	0.03	2	69.721					10948
11989	-64	1886	7.22	K0		20	12.966	0.10	4	69.721	-64 27' 11.28	0.13	4	69.721		16879			19507
11990	-33	8380	8.1	G5		20	13.542	0.13	4	69.722	-33 43' 03.22	0.15	4	69.722					10949
11991	-24	10312	6.92	K0		20	23.552	0.12	4	69.318	-24 35' 39.67	0.17	4	69.318		16880			10950
11992	-74	907	9.2	K0	12	20	23.730	0.21	5	70.432	-74 57' 13.86	0.34	5	70.432					19508
11992 SP						20	23.647	0.06	3	70.141	-74 57' 12.69	0.22	3	70.141					19508
11993	-51	6640	7.9	K0		20	27.918	0.10	4	69.351	-52 08' 35.62	0.18	4	69.351					10951
11994	-40	7264	8.0	K0		20	28.133	0.15	4	69.727	-40 46' 04.82	0.23	4	69.727					1473
11995	- 0	2566	9.0	F8		20	30.896	0.02	2	69.796	- 0 39' 32.42	0.06	2	69.796					10952
11996	- 6	3557	7.10	K0	12	20	35.052	0.11	2	69.850	- 7 01' 18.92	0.09	2	69.850		16883			10953
11997	- 4	3268	6.68	K0		20	41.007	0.13	2	69.885	- 4 41' 49.64	0.14	2	69.885		16885			10954
11998	-49	7052	8.7	K2		20	49.272	0.09	4	69.332	-50 21' 26.50	0.13							

CATALOG OF 23,001 STARS FOR 1950.0

401

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12001	-34	8117	5.42	B9	12 20 57.167	0.05	7	69.754	-35 08 07.77	0.10	7	69.754	2992	16892		32992
12002	-65	1857	8.5	K5	20 57.683	0.06	5	70.205	-65 26 03.33	0.20	5	70.205				19509
12003	-15	3459	8.5	F0	21 00.496	0.12	2	71.406	-16 24 13.64	0.06	2	71.406				10957
12004	-63	2261	8.2	A5	21 01.385	0.18	4	70.494	-63 42 31.83	0.20	4	70.494				10958
12005	-19	3479	7.9	K0	21 03.399	0.03	2	71.386	-19 48 37.80	--	1	71.496				10959
12006	+ 2	2534	8.8	A3	12 21 05.008	0.08	2	71.692	+ 1 47 59.36	0.01	2	71.692				10960
12007	-36	7822	9.1	K2	21 06.848	0.08	4	70.157	-36 35 52.04	0.22	4	70.157				10961
12008	-72	1242	8.9	K5	21 07.711	0.08	6	70.402	-72 50 59.36	0.19	5	70.616				19510
12009	-29	9709	6.64	K2	21 10.220	0.18	4	69.739	-30 03 29.51	0.15	4	69.739		16897	2861	10962
12010	-59	4198	8.6	K0	21 13.313	0.20	4	69.780	-59 48 25.03	0.06	4	69.780				10963
12011	-57	5442	7.8	G0	12 21 25.742	0.04	4	69.279	-57 38 27.46	0.16	4	69.279				10964
12012	-25	9216	8.1	K5	21 27.045	0.08	4	70.500	-25 44 12.95	0.04	4	70.500				10965
12013	-27	8655	8.7	F8	21 33.211	0.14	4	70.474	-28 16 42.63	0.13	4	70.474				10966
12014	-22	3365	8.5	K2	21 38.441	0.11	4	69.788	-22 33 49.92	0.14	4	69.788				10967
12015	-49	7066	9.2	K2	21 44.001	0.06	4	69.665	-49 31 38.51	0.09	4	69.665				1475
12016	-11	3294	9.0	G5	12 21 56.651	0.12	2	70.818	-12 00 19.00	0.04	2	70.818				10968
12017	-38	7715	8.3	K5	21 57.688	0.12	4	70.189	-38 26 38.00	0.14	4	70.189				10969
12018	+ 5	2623	8.11	K0	21 59.312	0.04	2	71.273	+ 4 36 29.92	0.89	2	71.273		16914	2863	10970
12019	-39	7622	8.5	G5	22 13.720	0.11	4	69.699	-40 23 38.10	0.15	4	69.699				1476
12020	-19	3486	8.8	K0	22 17.998	0.21	2	70.740	-19 35 37.24	0.05	2	70.740				10971
12021	-59	4210	8.8	G0	12 22 20.920	0.11	4	69.229	-60 04 11.69	0.07	4	69.229				10972
12022	-43	7656	8.8	K5	22 22.559	0.13	4	70.192	-44 24 14.12	0.12	4	70.192				1477
12023	-36	7837	8.8	K0	22 23.130	0.10	4	70.129	-37 04 41.98	0.10	4	70.129				10973
12024	-20	3642	8.7	K0	22 23.967	0.12	5	70.332	-21 23 10.85	0.07	5	70.332				10974
12025	- 3	3280	8.3	G5	22 24.988	0.17	2	70.848	- 3 56 49.64	0.10	2	70.848		16925	2864	10975
12026	-41	7163	6.26	G0	12 22 28.809	0.05	6	68.768	-42 14 13.98	0.09	6	68.768	2995	16928	2865	32995
12027	-10	3467	5.95	A0	22 36.710	0.02	2	70.880	-11 20 00.67	0.12	2	70.880		16931		10976
12028	-23	10534	8.72	K2	22 40.697	0.03	4	70.305	-24 06 52.60	0.09	4	70.305		16935		10977
12029	-27	8670	6.34	K0	22 40.987	0.03	84	71.027	-27 28 19.61	0.03	82	71.053	1319	16936	2866	81319
12030	-44	7996	8.78	A2	22 44.079	0.06	4	69.770	-45 20 54.46	0.11	4	69.770		16939		1478
12031	- 0	2570	8.9	G0	12 22 44.195	0.10	2	70.718	- 0 47 35.20	0.21	2	70.718				10978
12032p	-30	9899	8.3	G5	22 45.805	0.15	4	70.362	-30 51 13.11	0.23	4	70.362				10979
12033	-76	730	8.2	K5	22 48.758	0.09	4	69.251	-76 36 24.24	0.12	4	69.251				19511
12033 SP					22 48.809	0.21	4	69.806	-76 36 23.86	0.16	4	69.806				19511
12034	-61	3158	9.0	F8	22 50.377	0.07	4	69.190	-62 01 33.87	0.08	4	69.190				10980
12035	- 9	3492	8.3	K5	12 23 00.450	0.05	2	70.391	- 9 45 40.70	0.05	2	70.391				10981
12036	- 6	3565	8.9	K0	23 01.647	0.13	2	69.800	- 7 20 11.34	0.06	2	69.800				10982
12037	+ 0	2942	8.2	G5	23 06.972	0.04	2	70.664	- 0 00 19.88	0.23	2	70.664				10983
12038	-35	7945	9.2	K1	23 15.727	0.12	4	70.141	-35 52 37.95	0.21	4	70.141				10984
12039	-51	6679	9.0	G5	23 21.780	0.11	4	69.318	-51 43 50.50	0.17	4	69.318				1479
12040	-39	7629	8.8	K0	12 23 22.799	0.14	4	70.233	-39 40 32.15	0.25	4	70.233				10985
12041	-11	3299	8.6	K0	23 23.236	0.01	2	70.725	-11 36 46.95	0.03	2	70.725				10986
12042	-17	3621	8.4	K5	23 23.308	0.12	2	71.695	-17 39 08.54	0.21	2	71.695				10987
12043	+ 2	2539	7.3	A0	23 27.441	0.01	2	71.586	+ 2 19 07.41	0.08	2	71.586				10988
12044	-62	2740	8.9	A0	23 34.205	0.02	4	69.709	-62 59 54.83	0.12	4	69.709				10989
12045	+ 1	2696	8.6	K0	12 23 43.225	0.15	2	71.447	+ 0 47 29.52	0.09	2	71.447				10990
12046	-42	7638	8.5	M0	23 45.902	0.19	4	70.559	-42 59 01.83	0.15	4	70.559				1480
12047p	-62	2745	1.58	B1	23 47.890	0.09	29	70.913	-62 49 19.93	0.07	27	70.823	462	16952	2873	30462
12048	-50	6975	5.04	B3	23 48.965	0.12	7	71.127	-51 10 25.64	0.13	7	71.127		16954		21047
12049	-30	9913	8.5	F2	23 50.929	0.10	4	70.052	-31 21 07.33	0.11	4	70.052				10991
12050	- 5	3497	8.8	K5	12 23 53.611	0.08	2	72.218	- 5 45 50.31	0.09	2	72.218				10992
12051	+28	2115	5.15	A5	23 54.122	0.11	6	70.416	+27 32 41.95	0.23	6	70.416	2997	16955	2875	32997
12052	-18	3393	8.0	F2	23 55.035	0.02	3	71.930	-19 02 21.49	0.17	2	71.816				10993
12053	-40	7298	9.0	F0	23 55.272	0.12	5	71.097	-41 16 08.45	0.13	5	71.097				1481
12054	-12	3637	8.2	F2	23 56.311	0.02	2	71.797	-13 31 06.08	0.45	2	71.797				10994
12055	-54	5197	7.8	K0	12 23 56.602	0.24	4	70.267	-54 32 47.20	0.07	3	69.930				10995
12056	-14	3515	8.6	K0	23 58.749	0.04	2	72.253	-14 42 37.89	0.04	2	72.253				10996
12057	+ 3	2644	8.5	G5	23 59.837	0.12	3	72.248	+ 2 43 08.40	0.52	2	72.291				10997
12058	-32	8713	5.68	A0	24 13.168	0.04	43	71.064	-32 33 11.54	0.05	42	71.037	463	16959	2877	30463
12059	-46	7930	8.5	K2	24 14.253	0.10	4	70.580	-47 18 55.65	0.10	4	70.580				1482
12060	-60	3992	7.3	K0	12 24 15.380	0.13	6	71.216	-61 06 30.57	0.16	5	71.593				10998
12061	-52	5603	7.21	K0	24 15.571	0.12	5	71.011	-52 25 34.09	0.10	5	71.011		16962		10999
12062	-70	1483	8.9	K5	24 22.745	0.07	4	70.587	-71 23 26.65	0.17	4	70.587				19512
12063	- 8	3348	7.8	F2	24 24.086	0.10	2	71.342	- 8 33 11.05	0.18	2	71.342				11000
12064	-34	8169	8.9	K2	24 24.649	0.14	5	70.998	-34 41 46.45	0.09	4	70.710				11001
12065	+29	2288	4.56	K0	12 24 26.749	0.20	6	71.618	+28 32 44.10	0.23	6	71.618	2999	16964	2879	32999
12066	- 2	3520	8.3	K2	24 36.132	0.19	2	71.743	- 3 00 38.82	0.14	2	71.743				11002
12067	-66	1770	9.0	K0	24 39.903	0.26	4	70.323	-66 40 17.33	0.07	4	70.323				19513
12068	-32	8720	8.30	K2	24 43.890	0.16	4	70.763	-32 30 01.82	0.20	4	70.763		16972		11003
12069	-29	9748	8.0	F2	24 50.627	0.08	4	70.302	-29 48 30.64	0.11	4	70.302				11004
12070	-46	7937	8.5	K2	12 24 52.872	0.20	4	70.982	-46 31 22.03	0.14	4	70.982				1483
12071	-20	3649	7.6	K0	24 53.788	0.06	4	70.272	-20 57 00.23	0.15	4	70.272				11005
12072	-84	394	8.0	F8	24 59.682	0.11	4	69.696	-85 18 10.36	0.07	4	69.696				19514
12072 SP					24 59.447	0.18	3	70.732	-85 18 10.29	0.40	3	70.732				19514
12073	+ 5	2630	8.7	K0	25 06.176	0.34	2	72.196	+ 4 41 38.27	0.10	2	72.196		16979		11006

12032 SDS, 10.8m, 2"5, 84°.

12047 Alpha Crucis SDS, 2.09m, 4"2, 114°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12074	-24 10363	8.5	G0	12 25 13.167	0.15	4	69.360	-25 03 05.29	0.13	4	69.360				11007
12075	-48 7440	8.5	K0	25 14.021	0.09	4	70.805	-48 43 02.61	0.14	4	70.805				1484
12076	-83 461	6.62	B9	25 15.860	0.02	208	70.960	-83 31 34.36	0.03	201	70.926	3984	16987		63984
12076 SP				25 15.834	0.02	175	70.879	-83 31 34.37	0.04	170	70.885	3984	16987		73984
12077	-55 5076	9.1	F0	25 17.194	0.15	4	70.550	-56 12 46.47	0.09	4	70.550				11008
12078	-3 3298	6.03	F2	12 25 17.351	0.06	7	71.218	-4 20 19.84	0.14	7	71.218	3001	16989		33001
12079	-69 1657	7.5	K2	25 19.130	0.11	4	69.783	-70 16 06.81	0.19	4	69.783				19515
12080	-49 7115	4.16	B3	25 19.435	0.04	26	70.741	-49 57 14.21	0.05	26	70.741	464	16990	2884	30464
12081	-52 5616	7.5	K0	25 28.966	0.08	4	70.293	-53 18 00.95	0.08	4	70.293				11009
12082	-6 3578	8.9	K0	25 29.094	0.13	2	70.685	-6 38 46.19	0.04	2	70.685				11010
12083	-67 1960	9.2	M	12 25 35.104	0.09	4	70.389	-67 32 01.07	0.35	4	70.389				19516
12084	-18 3397	8.8	K5	25 39.935	0.06	2	69.796	-18 46 15.46	0.12	2	69.796				11011
12085	-38 7753	5.60	B8	25 42.392	0.05	20	70.561	-38 45 52.55	0.05	18	70.630	1320	17001	2885	31320
12086	-60 4031	7.1	K0	25 43.797	0.11	5	71.202	-60 37 07.99	0.10	5	71.202				11012
12087	-57 5502	8.4	K0	25 53.063	0.05	4	70.283	-57 54 25.51	0.05	4	70.283				11013
12088	-54 5210	9.0	G5	12 25 54.921	0.23	5	70.318	-55 10 43.56	0.10	5	70.318				11014
12089	-39 7645	9.3	G5	25 56.694	0.10	4	70.875	-39 41 31.06	0.18	4	70.875				11015
12090	-10 3478	8.0	F2	26 01.385	0.02	2	70.777	-10 44 44.64	0.32	2	70.777				11016
12091	-15 3475	7.8	K5	26 02.808	0.15	4	71.951	-15 43 44.98	0.09	3	71.875				11017
12092	-74 919	7.9	K5	26 03.047	0.22	4	69.728	-75 20 33.66	0.10	4	69.728				19517
12092 SP				12 26 03.035	0.15	4	70.132	-75 20 33.67	0.32	4	70.132				19517
12093	-22 3379	7.7	K2	26 03.649	0.11	4	69.708	-22 38 49.73	0.11	4	69.708				11018
12094	-42 7672	9.5	G5	26 04.378	0.11	4	70.632	-43 21 24.39	0.16	4	70.632				1485
12095	-3 3302	8.3	F0	26 10.195	0.03	2	72.246	-4 00 50.34	0.03	2	72.246				11019
12096f	-37 7902	7.7	K0	26 13.424	0.10	4	70.531	-37 41 25.46	0.16	4	70.531				11020
12097	-5 3506	7.8	K2	12 26 17.029	0.17	3	72.239	-6 15 14.37	0.13	3	72.239				11021
12098	+1 2701	8.5	G5	26 20.808	0.09	3	71.938	+1 25 32.15	0.23	2	71.833		17011		11022
12099	-1 2674	7.6	M0	26 35.652	0.11	2	70.885	+2 09 11.61	0.17	2	70.885		17014		11023
12100	-58 4324	7.89	F2	26 46.290	0.10	5	69.654	-58 48 33.00	0.16	4	69.733		17016		11024
12101	-0 2583	8.8	K5	26 48.987	0.30	2	71.709	-0 57 23.89	0.37	2	71.709				11025
12102	-24 10387	8.7	K2	12 27 03.407	0.35	4	69.778	-25 01 54.12	0.20	4	69.778				11026
12103*	-28 9529	7.7	K0	27 10.378	0.08	4	69.806	-29 02 08.06	0.16	4	69.806				11027
12104*	-49 7142	9.0	G5	27 11.896	0.14	4	69.296	-49 58 47.51	0.18	4	69.296				1486
12105	+21 2424	5.72	A2	27 12.609	0.07	11	70.077	+21 10 21.22	0.10	11	70.077	466	17026	2887	30466
12106	-44 8045	9.0	K5	27 13.238	0.07	4	70.464	-45 16 01.60	0.24	4	70.464				1487
12107	-15 3482	3.11	A0	12 27 16.060	0.03	37	71.601	-16 14 17.22	0.05	37	71.581	465	17029	2888	30465
12108	-25 9281	8.5	G5	27 17.553	0.11	4	70.272	-26 08 36.45	0.08	4	70.272				11028
12109	-38 7770	8.7	F0	27 18.046	0.06	4	70.179	-38 57 03.83	0.06	4	70.179				11029
12110	-34 8203	8.6	K5	27 25.634	0.05	4	70.283	-34 31 29.52	0.08	4	70.283				11030
12111	-32 8743	7.6	K2	27 27.097	0.06	4	70.165	-33 03 07.33	0.05	4	70.165				11031
12112*	-12 3647	6.41	G0	12 27 29.559	0.10	2	70.824	-13 06 59.57	0.03	2	70.824		17036		11032
12113	-29 9774	8.3	K5	27 31.883	0.09	4	69.874	-30 16 34.03	0.15	4	69.874				11033
12114	-45 7799	8.0	K5	27 33.622	0.12	4	69.784	-46 18 28.55	0.09	4	69.784				1488
12115	-17 3636	8.9	F2	27 35.031	0.06	2	71.666	-17 39 54.85	--	1	72.056				11034
12116	-26 9165	7.8	M0	27 45.570	0.11	5	70.353	-26 48 34.82	0.20	5	70.353				11035
12117	+1 2704	9.0	K2	12 27 54.946	0.04	2	69.867	+0 51 02.10	0.14	2	69.867				11036
12118	-35 7998	8.5	K5	27 57.791	0.10	4	70.179	-35 57 48.46	0.09	4	70.179				11037
12119	-9 3508	8.0	K0	28 03.331	0.16	2	70.776	-9 32 53.67	0.11	2	70.776				11038
12120	-16 3477	8.7	K5	28 06.712	0.11	2	70.366	-16 40 48.78	0.21	2	70.366				11039
12121	-3 3309	7.06	K0	28 16.054	0.15	2	69.837	-3 47 05.27	0.11	2	69.837		17050	2891	11040
12122	-42 7699	9.0	K0	12 28 18.750	0.20	4	69.731	-42 37 07.58	0.17	4	69.731				1489
12123	-56 5272	1.61	M3	28 22.771	0.03	85	71.105	-56 50 05.92	0.04	83	71.092	468	17052	2892	30468
12124	-27 8731	8.4	K0	28 35.640	0.08	4	69.192	-27 34 04.25	0.06	4	69.192				11041
12125	+4 2624	8.3	G0	28 39.683	0.04	2	69.721	+3 50 19.69	0.05	2	69.721				11042
12126	+3 2660	8.4	K0	28 44.016	0.07	2	70.660	+2 34 42.69	0.17	2	70.660				11043
12127	-47 7672	9.0	K2	12 28 46.295	0.08	4	69.735	-47 24 59.39	0.12	4	69.735				1490
12128	-11 3314	8.7	K5	28 48.339	0.10	2	70.713	-12 12 20.82	0.14	2	70.713				11044
12129	+8 2609	6.16	K5	28 48.881	0.11	6	68.761	+7 52 48.61	0.10	6	68.761	3002	17063	2893	33002
12130	-7 3420	8.8	K2	28 52.071	0.04	2	70.739	-7 52 56.55	0.55	2	70.739				11045
12131	-79 693	7.12	A0	28 56.447	0.06	4	70.123	-79 30 28.60	0.08	4	70.123		17066		19518
12131 SP				12 28 56.484	0.13	4	69.775	-79 30 28.19	0.20	4	69.775		17066		19518
12132	-77 839	9.1	K0	28 56.676	0.18	5	70.032	-77 25 30.80	0.11	5	70.032				19519
12132 SP				28 56.600	0.14	4	70.251	-77 25 30.87	0.29	3	70.083				19519
12133	-14 3530	7.46	F2	29 12.819	0.05	2	71.336	-15 26 21.60	0.44	2	71.336		17078		11046
12134	-13 3547	9.0	F5	29 16.009	0.38	2	71.392	-14 26 40.49	0.57	2	71.392				11047
12135	-31 9744	8.2	K5	12 29 17.022	0.11	4	69.742	-32 23 48.54	0.05	4	69.742				11048
12136	-34 8235	9.4	A0	29 17.097	0.17	5	69.705	-35 22 27.90	0.10	4	69.778				11049
12137	-40 7344	7.30	K2	29 17.663	0.07	4	70.194	-40 46 44.90	0.09	4	70.194		17082		1491
12138	-56 5285	7.6	K0	29 20.350	0.20	4	69.769	-57 03 50.06	0.06	4	69.769				11050
12139	-4 3297	8.4	K2	29 22.609	0.02	2	71.382	-5 30 47.02	0.25	2	71.382				11051
12140	-42 7713	8.0	G5	12 29 23.276	0.04	4	69.703	-43 15 35.99	0.22	4	69.703				1492
12141	-7 3423	8.7	G0	29 26.324	0.25	2	71.272	-8 20 08.84	0.22	2	71.272				11052
12142	-71 1336	4.04	B5	29 26.865	0.03	76	71.050	-71 51 25.30	0.03	74	71.059	469	17086	2897	30469
12142 SP				29 26.831	0.07	53	71.439	-71 51 25.60	0.15	48	71.481	469	17086	2897	50469
12143	-72 1266	8.29	G0	29 35.657	0.17	4	70.106	-73 22 49.82	0.12	4	70.106		17089		19520

12096 SDS, 10.4m, 2"3, 234°.
12103 8.1m-10.1m, 0"5, 298°.

12104 9.8m-9.8m, 0"2.
12112 A 8573, 6.4m-10.2m, 1"8, binary.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12144	-50	7060	8.5	K2	12 29 39.976	0.09	4	70.124	-50 57 09.03	0.12	4	70.124				1493
12145	-30	9973	8.8	K2	29 54.276	0.14	4	68.814	-31 00 51.14	0.06	4	68.814				11053
12146	-17	3644	8.4	K2	29 55.179	0.05	2	71.415	-18 28 09.89	0.03	2	71.415				11054
12147	-20	3667	6.52	K2	29 55.834	0.07	7	70.238	-20 56 09.18	0.10	7	70.238	3003	17093		33003
12148	-55	5128	7.7	K2	29 56.728	0.10	4	69.827	-56 01 57.47	0.19	4	69.827				11055
12149	-23	10591	7.4	A2	12 29 59.447	0.14	4	69.257	-23 55 30.16	0.07	4	69.257				11056
12150	-13	3552	5.70	F0	30 00.284	0.12	2	71.691	-13 34 58.57	0.28	2	71.691		17095		11057
12151	-16	3488	8.5	G5	30 04.887	0.10	2	71.732	-16 56 42.22	0.07	2	71.732				11058
12152	-34	8243	8.8	K0	30 07.818	0.09	4	70.168	-35 12 22.71	0.04	4	70.168				11059
12153	-64	1959	8.7	K0	30 13.756	0.12	4	69.853	-64 31 06.84	0.10	4	69.853				19521
12154	-19	3511	8.7	A5	12 30 15.587	0.26	2	71.709	-19 35 04.53	0.22	2	71.709				11060
12155	-36	7925	8.7	K2	30 24.932	0.15	4	70.205	-37 22 16.32	0.12	4	70.205				11061
12156	+ 0	2952	8.0	F0	30 25.245	0.30	2	71.724	+ 0 00 06.61	0.11	2	71.724				11062
12157	+11	2473	6.46	K0	30 30.925	0.11	6	70.177	+10 34 16.88	0.11	6	70.177	3004	17103	2900	33004
12158	-52	5680	8.0	K0	30 32.281	0.20	4	69.835	-53 04 30.00	0.10	3	69.354				11063
12159	-54	5241	7.39	A2	12 30 33.071	0.14	5	70.650	-54 42 19.42	0.13	5	70.650		17105		11064
12160	+ 1	2714	8.5	G5	30 35.009	0.02	2	71.744	+ 1 19 12.53	0.03	2	71.744		17106		11065
12161	-10	3493	8.3	F5	30 35.208	0.12	2	70.677	-10 51 30.01	0.41	2	70.677				11066
12162	-20	3669	8.5	K5	30 38.580	0.21	4	69.770	-20 48 33.85	0.11	4	69.770				11067
12163	-24	10417	8.5	K0	30 40.900	0.09	4	70.212	-24 59 29.51	0.07	4	70.212				11068
12164	-12	3659	5.76	G5	12 30 58.415	0.02	74	70.554	-12 33 17.94	0.03	74	70.554	1321	17113	2901	81321
12165	+ 5	2643	8.3	K0	31 04.015	0.14	2	71.752	+ 4 29 46.25	0.24	2	71.752				11069
12166	-41	7262	9.0	G5	31 06.116	0.08	4	70.202	-41 59 35.14	0.20	4	70.202				1494
12167	-16	3493	8.8	G5	31 10.254	0.07	3	72.229	-17 26 46.80	0.09	3	72.229				11070
12168	-58	4368	8.7	F2	31 12.073	0.08	5	70.045	-58 58 55.87	0.11	4	70.222				11071
12169	- 4	3301	8.5	F5	12 31 13.950	0.02	2	71.710	- 4 58 00.52	0.33	2	71.710				11072
12170	- 5	3526	8.0	F8	31 20.647	0.15	2	71.707	- 6 30 09.39	0.42	2	71.707				11073
12171	-31	9772	8.0	G5	31 25.744	0.17	4	70.197	-32 12 47.11	0.07	4	70.197				11074
12172	-37	7958	8.4	K5	31 26.026	0.07	4	69.754	-38 22 51.41	0.16	4	69.754				11075
12173	-22	3399	7.46	K0	31 26.992	0.09	4	70.276	-23 16 14.20	0.20	4	70.276		17129		11076
12174	-34	8259	9.0	K2	12 31 29.136	0.24	4	70.472	-34 27 34.19	0.25	4	70.472				11077
12175	-57	5560	7.9	G0	31 40.610	0.13	5	70.397	-58 03 20.81	0.13	5	70.397				11078
12176	-44	8097	9.1	M0	31 42.574	0.13	5	69.713	-45 07 13.95	0.02	4	69.787				1495
12177	-22	3401	2.84	G5	31 45.341	0.03	57	71.150	-23 07 14.91	0.04	55	71.114	471	17133	2906	30471
12178	- 0	2590	7.14	K2	31 49.281	0.10	2	70.744	- 1 07 55.69	0.33	2	70.744		17136		11079
12179	-48	7517	8.0	K5	12 31 51.073	0.21	4	70.501	-48 26 40.62	0.21	4	70.501				1496
12180	-50	7097	9.0	G5	31 57.532	0.10	4	69.288	-50 39 28.06	0.14	4	69.288				1497
12181	-15	3498	8.0	F0	32 00.537	0.17	2	70.922	-16 04 43.78	0.15	2	70.922				11080
12182	-35	8057	8.2	K5	32 09.871	0.05	4	70.493	-36 14 14.87	0.19	4	70.493				11081
12183	-30	9995	9.0	K0	32 13.362	0.06	4	69.373	-31 08 24.11	0.11	4	69.373				11082
12184*	- 4	3307	8.1	A5	12 32 18.815	0.25	2	70.724	- 4 52 45.58	0.19	2	70.724				11083
12185	+23	2475	4.78	A0	32 21.544	0.11	9	70.842	+22 54 15.84	0.11	9	70.842	1323	17142	2907	31323
12186	-26	9203	8.3	F2	32 22.369	0.13	4	70.225	-26 26 13.69	0.16	4	70.225				11084
12187	-51	6813	8.4	K2	32 32.281	0.18	4	69.257	-52 08 24.32	0.14	4	69.257				1498
12188	-68	1696	8.8	A0	32 32.955	0.07	4	68.788	-68 33 25.75	0.08	4	68.788				19522
12189	+19	2584	5.18	K0	12 32 37.292	0.03	64	70.799	+18 39 07.87	0.05	60	70.723	473	17147	2908	80473
12190	+ 3	2670	7.02	F5	32 42.810	0.12	2	71.426	+ 2 32 09.28	0.18	2	71.426		17155		11085
12191	-78	765	9.0	K5	32 52.625	0.05	4	69.205	-78 42 32.99	0.17	4	69.205				19523
12191 SP					32 52.620	0.08	4	69.248	-78 42 33.59	0.04	4	69.248				19523
12192	- 2	3540	8.0	K5	32 53.309	0.46	2	70.787	- 3 16 14.78	0.00	2	70.787				11086
12193	-29	9819	8.0	K2	12 32 55.631	0.11	4	69.636	-29 48 34.07	0.15	4	69.636				11087
12194	-27	8774	8.6	F2	32 57.073	0.06	4	69.801	-28 22 03.47	0.13	4	69.801				11088
12195	-40	7376	5.23	A5	33 03.384	0.07	6	70.055	-40 44 47.95	0.07	6	70.055	3005	17158		33005
12196	- 7	3439	8.7	K2	33 03.623	0.04	2	69.878	- 8 21 20.53	0.16	2	69.878				11089
12197	+ 4	2630	8.6	G0	33 05.804	0.17	2	70.665	+ 3 41 25.13	0.17	2	70.665				11090
12198	- 2	3542	8.3	F5	12 33 08.948	0.22	2	71.684	- 2 44 27.86	0.50	2	71.684				11091
12199	- 6	3598	7.9	F0	33 09.944	0.12	2	70.754	- 7 10 18.10	0.25	2	70.754				11092
12200	- 0	2592	8.6	K2	33 22.079	0.01	2	70.676	- 1 08 21.62	0.01	2	70.676				11093
12201	-51	6827	6.77	K2	33 25.434	0.05	6	69.445	-52 08 32.53	0.07	6	69.445	3006	17168		33006
12202	-45	7876	8.9	K0	33 25.767	0.09	4	70.201	-45 24 59.51	0.06	4	70.201				1499
12203	-33	8511	7.8	K5	12 33 27.772	0.12	5	70.818	-33 28 15.18	0.22	5	70.818				11094
12204*	-46	8027	9.0	G5	33 30.113	0.06	4	70.271	-46 33 15.84	0.08	4	70.271				1500
12205	- 9	3520	8.8	A2	33 32.880	0.07	2	69.837	-10 06 33.04	0.07	2	69.837				11095
12206	-22	3406	8.5	K0	33 39.164	0.17	5	70.835	-22 41 38.17	0.08	5	70.835				11096
12207	-42	7765	7.42	K0	33 42.654	0.07	5	70.253	-43 12 47.61	0.19	4	70.200		17174		1501
12208	-14	3541	8.8	K0	12 33 47.309	0.33	2	71.721	-15 08 23.17	0.36	2	71.721				11097
12209	+ 1	2724	9.0	G0	33 48.353	0.20	2	71.739	+ 1 19 11.70	0.23	2	71.739				11098
12210	-11	3335	8.7	K2	33 48.815	0.05	2	71.714	-12 16 21.37	0.27	2	71.714				11099
12211	+ 0	2958	8.7	K0	33 48.922	0.00	2	71.713	- 0 01 06.28	0.12	2	71.713				11100
12212	- 5	3534	8.3	A3	33 59.156	0.04	2	71.392	- 5 47 26.14	0.18	2	71.392				11101
12213	-20	3679	8.1	K2	12 34 02.687	0.16	4	69.345	-21 01 53.35	0.10	4	69.345				11102
12214	-18	3428	8.7	K5	34 06.414	0.06	2	71.401	-18 43 37.96	0.21	2	71.401				11103
12215	-68	1702	2.94	B3	34 10.458	0.03	69	71.231	-68 51 37.38	0.04	69	71.231	474	17179	2910	30474
12216	-34	8291	7.5	K2	34 11.464	0.08	4	70.445	-35 09 17.89	0.16	4	70.445				11104
12217	- 5	3535	5.90	A0	34 12.616	0.03	50	71.430	- 5 33 24.17	0.04	47	71.400	1324	17180	2911	31324

12184 8.6m-8.6m, 0^m.1.12204 9.4m-9.5m, 0^m.1.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12218	-15	3506	8.6	K0	12	34	18.497	0.06	2	71.285	-16 28 49.96	0.17	2	71.285					11105
12219	+17	2504	5.78	K2	34	27.861	0.04	6	70.009	+17 21 52.87	0.12	6	70.009			3007	17183	2912	33007
12220	-37	7999	11.6	F8	34	28.465	0.15	5	71.262	-37 48 27.26	0.14	4	71.724						11106
12221	-1	2699	6.98	F5	34	32.376	0.25	2	71.692	-2 02 45.16	0.33	2	71.692				17185		11107
12222	-24	10448	7.8	K0	34	33.207	0.11	4	69.734	-24 37 03.36	0.09	4	69.734						11108
12223	-19	3528	8.6	K0	12	34	35.020	0.19	2	71.418	-19 48 13.82	0.27	2	71.418					11109
12224	-25	9344	8.2	K5	34	35.309	0.18	3	69.021	-25 44 37.04	0.27	3	69.021						11110
12225	-30	10016	8.2	K2	34	44.775	0.07	4	69.763	-31 15 44.86	0.14	4	69.763						11111
12226	-27	8785	8.2	F7	34	51.979	0.10	4	69.608	-28 08 29.24	0.12	4	69.608						11112
12227	-68	1706	7.36	G5	34	59.375	0.13	4	69.292	-69 19 41.50	0.20	4	69.292				17196		19524
12228	-56	5352	8.0	K0	12	35	00.362	0.06	4	69.752	-57 04 29.92	0.16	4	69.752					11113
12229	-51	6854	10.3	A2	35	07.566	0.07	4	69.743	-52 14 12.73	0.12	4	69.743						1502
12230	+4	2631	6.25	A0	35	31.362	0.06	2	69.800	+3 33 26.36	0.09	2	69.800				17203		11114
12231	-52	5748	8.8	K2	35	36.540	0.05	5	70.056	-52 48 06.81	0.08	4	70.237						11115
12232	-30	10027	8.7	K5	35	37.706	0.05	4	69.676	-30 28 58.42	0.05	4	69.676						11116
12233	-75	827	6.82	K0	12	35	37.922	0.12	6	70.031	-75 47 27.78	0.21	6	70.031			3008	17205	33008
12233	SP				35	37.903	0.11	6	70.633	-75 47 28.02	0.46	5	70.601			3008	17205		53008
12234	+2	2559	8.6	K2	35	39.695	0.16	2	71.384	+2 15 16.73	0.22	2	71.384						11117
12235	-11	3338	7.3	G5	35	41.184	0.00	2	71.702	-12 06 39.53	0.12	2	71.702						11118
12236	-13	3569	8.4	F2	35	41.268	0.07	2	71.695	-13 47 05.27	0.25	2	71.695						11119
12237	-10	3512	8.1	K0	12	35	44.055	0.16	2	71.609	-11 14 32.38	0.19	2	71.609				17207	11120
12238	+2	2560	6.02	M0	35	49.192	0.07	6	69.088	+2 07 46.34	0.16	6	69.088			3009	17209	2914	33009
12239	-66	1859	8.0	K0	35	50.196	0.09	4	69.875	-66 25 18.58	0.19	4	69.875						19526
12240	-73	1015	9.3	G5	35	53.924	0.09	4	69.837	-74 17 57.27	0.16	4	69.837						19527
12241	-61	3318	7.7	K0	35	55.790	0.11	4	70.207	-61 45 26.33	0.17	3	69.851						11121
12242	+1	2728	8.6	F5	12	35	58.677	0.18	2	70.680	+0 29 31.38	0.18	2	70.680					11122
12243	-36	7981	7.6	K0	35	59.747	0.09	5	69.868	-36 27 20.98	0.17	4	69.720						11123
12244	-61	3319	8.6	A0	36	06.365	0.09	4	69.823	-62 15 17.08	0.21	4	69.823						11124
12245	-17	3668	6.08	F0	36	07.563	0.10	6	69.473	-17 58 32.43	0.06	6	69.473			3010	17216	2915	33010
12246	-3	3329	6.94	K5	36	08.840	0.18	2	70.698	-4 05 55.73	0.33	2	70.698				17218		11125
12247	-38	7885	8.5	K2	12	36	12.581	0.11	4	70.140	-39 13 54.62	0.20	4	70.140					11126
12248	-2	3549	8.5	A3	36	13.286	0.09	2	71.692	-3 02 03.86	0.35	2	71.692						11127
12249	-29	9845	6.02	K0	36	23.372	0.08	6	69.486	-30 08 51.38	0.08	6	69.486			3011	17223		33011
12250	-71	1353	8.3	K0	36	24.366	0.08	4	69.741	-72 07 37.83	0.14	4	69.741						19528
12251	-48	7567	7.5	K2	36	26.101	0.14	4	70.193	-48 47 30.07	0.07	4	70.193						1503
12252	-65	1936	8.6	A3	12	36	27.580	0.25	4	70.186	-65 26 08.19	0.09	4	70.186					19529
12253	-7	3451	8.8	K2	36	29.172	0.10	2	70.695	-7 38 34.64	0.09	2	70.695						11128
12254	-54	5289	8.6	F8	36	31.566	0.12	4	70.529	-55 22 44.93	0.43	4	70.529						11129
12255	+21	2439	5.51	K0	36	37.982	0.05	6	69.827	+21 20 13.73	0.13	6	69.827			3012	17225	2918	33012
12256	-7	3452	4.78	K0	36	39.634	0.02	136	71.405	-7 43 15.00	0.03	133	71.389			475	17227	2919	80475
12257	-33	8543	9.1	K2	12	36	44.456	0.10	4	70.173	-33 32 23.06	0.04	4	70.173					11130
12258	-41	7321	9.3	K0	36	49.036	0.14	4	70.521	-41 27 53.88	0.15	4	70.521						1504
12259	-18	3435	8.3	K0	36	50.975	0.12	2	71.425	-18 57 51.94	0.31	2	71.425						11131
12260	-44	8141	8.0	M0	36	54.197	0.17	4	70.213	-44 39 08.29	0.08	4	70.213						1505
12261	-23	10651	7.6	F0	36	56.650	0.17	4	68.942	-23 32 08.35	0.08	4	68.942						11132
12262	-51	6893	8.8	K5	12	37	11.892	0.04	4	69.702	-52 22 37.87	0.19	4	69.702					11133
12263	-40	7422	9.1	K2	37	17.969	0.15	4	70.552	-40 28 56.14	0.16	4	70.552						1506
12264	-16	3513	8.8	G5	37	22.834	0.21	2	70.933	-17 24 35.46	0.12	2	70.933						11134
12265	-29	9853	8.60	A0	37	36.350	0.05	4	69.280	-29 38 33.93	0.04	4	69.280				17243		11135
12266	-49	7276	8.7	K0	37	40.454	0.05	4	69.696	-50 14 07.48	0.14	4	69.696						1507
12267	-70	1504	8.8	K0	12	37	42.827	0.15	4	69.771	-70 44 52.93	0.15	4	69.771					19530
12268	-47	7777	8.5	K2	37	45.912	0.08	4	70.733	-47 49 53.64	0.21	4	70.733						1508
12269	-67	2038	9.0	A0	37	49.534	0.05	5	70.043	-67 27 55.96	0.05	4	70.220						19531
12270	-43	7809	8.9	K0	37	57.259	0.11	5	70.506	-43 43 53.29	0.15	4	70.779						1509
12271	-38	7908	8.7	K5	37	58.142	0.04	4	70.745	-38 30 20.82	0.13	4	70.745						11136
12272	-26	9267	8.4	K0	12	38	04.378	0.05	4	69.638	-26 33 22.70	0.08	4	69.638					11137
12273	-15	3513	8.5	K5	38	05.996	0.02	2	70.881	-15 52 20.61	0.17	2	70.881						11138
12274	+4	2637	7.7	F0	38	17.086	0.13	2	70.869	+4 08 38.81	0.04	2	70.869						11139
12275	-34	8343	9.3	K5	38	20.708	0.12	5	70.377	-34 41 23.30	0.20	3	69.994						11140
12276	-9	3534	8.6	K2	38	33.887	0.07	4	70.028	-9 32 55.56	0.27	3	70.275						11141
12277	-27	8811	6.90	M0	12	38	33.933	0.13	4	69.239	-27 38 02.18	0.12	4	69.239				17255	11142
12278	-45	7944	5.84	K0	38	37.390	0.02	155	71.123	-45 52 18.74	0.02	151	71.102			1325	17257	2923	31325
12279	-19	3540	8.3	F0	38	52.759	0.03	3	69.281	-20 20 33.37	0.04	4	69.276						11143
12280	-39	7767	8.0	K5	38	57.704	0.17	4	70.227	-39 27 29.44	0.07	4	70.227						11144
12281	-59	4393	5.02	B8	39	02.918	0.05	7	71.005	-59 24 41.88	0.09	7	71.005				17268		21048
12282	-46	8104	8.37	K2	12	39	09.264	0.23	4	70.548	-47 19 55.12	0.04	4	70.548				17272	1510
12283	-75	832	9.3	K5	39	09.427	0.03	4	69.693	-76 00 33.38	0.25	4	69.693						19532
12283	SP				39	09.435	0.16	4	70.495	-76 00 33.44	0.44	4	70.495						19532
12284	-5	3550	8.3	K2	39	12.814	0.07	2	69.682	-6 08 24.00	0.15	2	69.682						11145
12285	-31	9840	9.0	K5	39	13.854	0.17	4	70.542	-32 10 46.07	0.16	4	70.542						11146
12286	-81	592	9.0	G5	12	39	15.557	0.08	4	69.186	-81 46 06.14	0.12	4	69.186					19533
12286	SP				39	15.465	0.12	4	69.736	-81 46 06.34	0.35	4	69.736						19533
12287	-20	3699	8.7	F8	39	16.564	0.14	4	69.741	-21 31 10.76	0.11	4	69.741						11147
12288	-21	3593	8.6	A2	39	18.014	0.07	4	69.778</										

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	PK4	GC	N30	No*
12290	-80°	663	9.0	K0	12 39 19.353	0.13	5	70.075	-81° 13' 26.51	0.10	5	70.075				19534
12290	SP				39 19.331	0.37	4	70.018	-81° 13' 25.84	0.22	4	70.018				19534
12291	+11	2485	4.95	A0	39 21.280	0.08	15	69.931	+10° 30' 37.34	0.07	15	69.931	1326	17276	2928	31326
12292	-6	3626	7.21	K5	39 22.388	0.16	2	70.835	-7° 13' 33.61	0.13	2	70.835		17277		11150
12293	-4	3331	8.1	G5	39 24.829	0.13	3	71.002	-4° 56' 47.29	0.60	3	71.002				11151
12294	+5	2669	8.0	K2	12 39 43.452	0.03	2	69.821	+4° 33' 59.14	0.21	2	69.821				11152
12295	+0	2972	8.2	F5	39 43.835	0.26	2	70.885	-0° 02' 03.09	0.07	2	70.885				11153
12296	-69	1695	8.7	G0	39 44.315	0.14	4	68.775	-69° 42' 55.27	0.08	4	68.775				19535
12297	-62	2898	6.00	B1p	39 53.079	0.12	6	69.138	-62° 47' 04.59	0.11	6	69.138	3015	17286		33015
12298	-82	534	9.1	G0	39 53.437	0.18	5	70.613	-82° 27' 37.89	0.18	5	70.613				19536
12298	SP				12 39 53.433	0.25	4	70.253	-82° 27' 37.37	0.24	3	70.073				19536
12299	+2	2569	8.4	A0	39 55.648	0.04	2	70.925	+1° 36' 11.91	0.08	2	70.925				11154
12300	+3	2681	8.5	K0	40 05.760	0.07	2	70.881	+2° 51' 03.72	0.20	2	70.881		17289		11155
12301	-64	1987	8.6	K5	40 06.914	0.13	4	69.267	-65° 23' 57.52	0.21	4	69.267				19537
12302	-33	8581	8.4	K2	40 15.513	0.09	5	69.650	-34° 01' 18.93	0.08	4	69.709				11156
12303	-12	3681	7.7	K0	12 40 18.920	0.05	2	70.777	-13° 21' 25.84	0.35	2	70.777				11157
12304	-71	1370	8.7	A0	40 22.789	0.20	4	69.339	-72° 10' 25.97	0.15	4	69.339				19538
12305	-35	8144	8.3	K5	40 23.229	0.18	5	70.627	-36° 11' 15.71	0.19	5	70.627				11158
12306	-53	5291	8.6	K0	40 24.224	0.08	4	68.855	-54° 08' 10.45	0.17	4	68.855				11159
12307	-23	10684	8.0	K2	40 25.845	0.07	4	69.769	-23° 34' 05.12	0.10	4	69.769				11160
12308	-35	8146	8.2	K5	12 40 30.796	0.08	4	70.188	-35° 44' 14.24	0.07	4	70.188				11161
12309	-24	10500	6.94	M0	40 33.675	0.10	4	69.786	-24° 42' 59.95	0.08	4	69.786		17299		11162
12310	-28	9665	8.5	K2	40 47.027	0.14	4	70.190	-28° 32' 35.07	0.09	4	70.190				11163
12311	-44	8183	8.7	K0	40 48.666	0.12	5	70.628	-44° 45' 29.92	0.18	5	70.628				1511
12312	-25	9397	7.48	K0	40 52.347	0.16	3	70.590	-26° 01' 39.69	0.09	4	70.257		17304	2933	11164
12313	-18	3452	8.6	K0	12 40 53.775	0.04	2	69.858	-18° 35' 45.60	0.04	2	69.858				11165
12314	-34	8377	7.6	F0	40 57.955	0.14	4	69.716	-35° 08' 24.88	0.21	4	69.716				18452
12315	+3	2685	8.3	F8	40 58.977	0.36	2	70.739	+2° 53' 40.68	0.16	2	70.739		17307		11166
12316	-0	2603	6.08	G0	41 03.891	0.09	4	70.295	-1° 18' 09.93	0.09	3	70.631		17309		11167
12317	-63	2406	8.6	A5	41 08.687	0.10	4	69.621	-63° 56' 15.98	0.09	4	69.621				11168
12318	-24	10507	8.6	K2	12 41 13.927	0.05	4	70.244	-24° 46' 04.17	0.09	4	70.244				11169
12319	-35	8155	6.44	A0	41 15.838	0.09	6	69.410	-36° 04' 31.61	0.09	6	69.410	3016	17311		33016
12320	-50	7232	8.5	K5	41 16.986	0.15	4	69.799	-50° 51' 21.51	0.22	4	69.799				1512
12321	-27	8832	5.73	K2	41 20.198	0.03	88	71.050	-28° 03' 00.09	0.03	88	71.050	479	17315	2936	30479
12322	-60	4260	9.0	A0	41 22.810	0.07	4	69.813	-61° 15' 05.59	0.21	4	69.813				11170
12323	-87	207	9.3	G5	12 41 30.903	0.20	4	69.281	-87° 50' 52.72	0.14	4	69.281				19539
12323	SP				41 31.228	0.14	4	69.478	-87° 50' 52.16	0.12	4	69.478				19539
12324	-42	7862	8.8	K0	41 33.277	0.22	5	70.745	-42° 30' 59.76	0.14	5	70.745				1513
12325	-2	3567	6.65	A2	41 36.958	0.02	2	70.845	-2° 34' 08.78	0.04	2	70.845		17319	2937	11171
12326	-7	3476	8.9	K0	41 38.770	0.36	2	71.380	-7° 35' 06.75	0.23	2	71.380				11172
12327	-37	8095	8.6	K5	12 41 41.671	0.14	4	69.764	-38° 22' 53.14	0.05	4	69.764				11173
12328	+4	2643	8.2	K0	41 42.951	0.11	2	70.843	+3° 37' 29.00	0.21	2	70.843				11174
12329	-49	7339	8.0	K0	41 49.310	0.06	4	70.264	-49° 45' 34.56	0.05	4	70.264				1514
12330	-53	5313	7.35	K0	41 49.712	0.07	4	69.812	-53° 48' 42.72	0.15	4	69.812		17323		11175
12331	-0	2606	8.8	K5	41 51.226	0.09	2	70.900	-1° 12' 58.31	0.01	2	70.900				11176
12332	+1	2746	8.4	M0	12 41 51.801	0.23	2	71.418	+0° 48' 36.17	0.10	2	71.418				11177
12333	-9	3547	8.6	K5	41 51.884	0.14	2	70.840	-9° 48' 28.38	0.05	2	70.840				11178
12334	-16	3527	7.35	K2	42 05.093	0.10	2	71.436	-17° 30' 16.35	0.31	2	71.436			2938	11179
12335	-1	2721	8.9	K2	42 06.012	0.13	2	71.395	-2° 26' 03.78	0.09	2	71.395				11180
12336	-59	4418	7.04	K2	42 10.524	0.15	4	69.796	-59° 48' 08.68	0.17	4	69.796		17331		11181
12337p	-61	3356	7.5	F8	12 42 16.436	0.13	4	69.827	-61° 56' 39.35	0.16	4	69.827				11182
12338	-51	6969	8.2	K2	42 20.691	0.31	4	69.795	-51° 33' 54.14	0.19	4	69.795				1515
12339p	-7	3478	7.3	K0	42 24.011	0.11	2	71.442	-8° 15' 31.03	0.13	2	71.442				11183
12340	-15	3525	8.6	F0	42 24.769	0.13	2	71.442	-15° 46' 12.20	0.29	2	71.442				11184
12341	-46	8152	8.0	K0	42 27.452	0.16	4	69.785	-46° 39' 40.59	0.15	4	69.785				1516
12342	-10	3546	8.3	K2	12 42 28.113	0.04	2	71.735	-10° 43' 34.11	0.12	2	71.735				11185
12343	-40	7471	9.12	K0	42 38.796	0.07	5	69.703	-41° 05' 32.60	0.11	4	69.776		17338		1517
12344	-3	3349	6.84	A3	42 42.824	0.10	2	71.718	-3° 36' 53.99	0.27	2	71.718		17341		11186
12345	-19	3560	7.5	A0	42 54.477	0.05	4	70.205	-19° 52' 21.08	0.06	3	70.512				11187
12346	-37	8109	8.0	K5	42 55.520	0.12	4	70.223	-37° 32' 51.24	0.06	4	70.223				11188
12347	+8	2639	5.24	A5	12 43 05.267	0.02	104	70.868	+7° 56' 47.16	0.03	100	70.834	1328	17346	2941	81328
12348	-45	7996	9.3	K0	43 07.019	0.18	4	70.175	-45° 25' 09.68	0.19	4	70.175				1518
12349	-30	10104	9.2	K0	43 08.806	0.23	4	69.717	-30° 32' 14.84	0.07	4	69.717				11189
12350	-11	3359	8.6	K0	43 10.625	0.10	2	70.680	-11° 56' 51.42	0.05	2	70.680				11190
12351*	-67	2064	3.26	B3	43 11.220	0.12	7	71.095	-67° 50' 05.11	0.14	7	71.095		17348	2943	21049
12352	-21	3600	8.3	A2	12 43 14.414	0.08	3	69.918	-22° 21' 25.84	0.05	4	69.754				11191
12353	-39	7817	8.8	K2	43 15.731	0.13	4	70.183	-39° 46' 03.56	0.15	4	70.183				11192
12354	-41	7399	9.2	K0	43 20.589	0.05	4	70.273	-41° 47' 59.08	0.18	4	70.273				1519
12355*	-31	9880	8.2	K0	43 22.809	0.07	4	70.260	-31° 29' 23.83	0.03	4	70.260				11193
12356	-14	3572	8.6	K0	43 23.317	0.20	2	70.410	-15° 15' 46.30	0.33	2	70.410				11194
12357	-48	7651	8.5	A2	12 43 27.580	0.15	5	70.390	-49° 02' 19.67	0.16	5	70.390				1520
12358	-43	7864	8.0	M0	43 27.774	0.03	4	70.214	-43° 43' 31.37	0.11	4	70.214				1521
12359	-57	5694	8.2	G5	43 28.601	0.11	4	69.267	-58° 18' 06.75	0.15	4	69.267				11195
12360	-55	5215	4.86	B3	43 29.490	0.07	6	69.059	-56° 12' 55.92	0.09	6	69.059	3018	17352		33018
12361	-13	3592	8.8	A5	43 36.663	0.08	2	71.432	-13° 54' 38.97	0.06	2	71.432				11196

12337 SDS, 10.1m, 4°9, 97°.
12339 11.2m, 7°5, 96°.

12351 SDS, 3.9m-4.2m, 1°4, 14°.
12355 SDS, 8.4m-10.6m, 0°5, 38°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
12362	+ 3	2695	8.1	A5	12 43 41.711	0.08	2	70.884	+ 2 44 14.55	0.34	2	70.884				11197
12363*	-20	3713	9.0	F8	43 48.835	0.11	4	69.833	-20 34 30.51	0.15	4	69.833				11198
12364	+ 3	2696	8.3	K2	43 50.951	0.00	2	71.395	+ 2 36 03.13	0.27	2	71.395				11199
12365	-21	3603	8.6	M0	43 55.842	0.09	4	70.202	-22 25 59.53	0.25	4	70.202				11200
12366	- 0	2608	8.13	K0	43 58.480	0.06	2	71.418	- 0 32 55.03	0.36	2	71.418		17359		11201
12367	-15	3531	9.0	F0	12 43 58.889	0.19	2	70.900	-16 15 30.40	0.04	2	70.900				11202
12368	-59	4440	8.1	K0	44 04.103	0.23	4	69.712	-60 08 02.95	0.17	4	69.712				11203
12369	-28	9699	8.5	K2	44 10.427	0.14	4	69.952	-28 42 44.16	0.12	4	69.952				11204
12370	-19	3567	8.6	K0	44 17.953	0.08	2	71.395	-19 39 45.88	0.37	2	71.395				11205
12371	-73	1037	7.3	K2	44 20.135	0.10	4	69.862	-73 32 22.97	0.11	4	69.862				19540
12372	- 6	3644	7.9	G5	12 44 23.609	0.03	2	71.451	- 7 31 35.57	0.21	2	71.451		17364		11206
12373	- 8	3424	7.7	K2	44 30.497	0.30	2	70.847	- 8 56 29.33	0.07	2	70.847				11207
12374	-25	9434	8.7	K5	44 32.499	0.17	4	69.833	-25 43 11.88	0.16	4	69.833				11208
12375p	-56	5434	8.9	G5	44 35.605	0.10	4	70.311	-57 10 05.81	0.08	4	70.311				11209
12376	-59	4451	1.50	B1	44 46.869	0.03	84	71.086	-59 24 57.07	0.03	84	71.086	481	17374	2947	30481
12377	-20	3717	8.2	K2	12 44 47.753	0.06	4	70.602	-21 11 28.65	0.14	4	70.602				11210
12378	-56	5437	8.3	K5	44 52.041	0.24	4	69.377	-56 46 18.15	0.10	4	69.377				11211
12379	-68	1758	8.7	K0	44 54.380	0.07	4	70.212	-68 26 49.54	0.14	4	70.212				19541
12380	- 5	3568	8.8	K2	44 56.904	0.16	2	70.871	- 5 37 04.97	0.23	2	70.871				11212
12381	- 3	3360	8.0	K2	44 59.374	0.31	2	70.829	- 4 24 30.37	0.04	2	70.829				11213
12382	-29	9920	7.8	M2	12 45 00.607	0.22	5	69.812	-29 31 19.93	0.18	5	69.812				11214
12383	-33	8624	8.0	F0	45 12.272	0.08	4	69.675	-33 47 16.72	0.10	4	69.675				11215
12384	-24	10539	6.86	K0	45 13.379	0.10	4	69.698	-24 44 32.63	0.02	4	69.698		17379		11216
12385	-24	10540	6.29	B9	45 13.763	0.04	41	71.150	-24 34 45.39	0.04	38	71.170	1329	17380	2948	31329
12386	-55	5233	8.7	K2	45 14.131	0.09	4	69.774	-55 55 44.82	0.10	4	69.774				11217
12387	+ 4	2653	6.66	M0	12 45 18.540	0.04	26	72.099	+ 3 50 43.23	0.04	25	72.096	1330	17381	2949	31330
12388	-35	8195	8.2	G5	45 22.930	0.15	4	69.669	-35 25 52.35	0.09	4	69.669				11218
12389	-38	8001	9.2	G5	45 27.674	0.07	4	69.702	-38 25 46.36	0.12	4	69.702				11219
12390	-47	7867	9.0	K0	45 29.077	0.11	5	69.670	-48 23 38.07	0.02	4	69.734				1522
12391	-52	5900	8.6	K0	45 29.434	0.03	4	69.810	-53 19 18.92	0.07	4	69.810				11220
12392	+ 0	2983	8.3	F8	12 45 32.720	0.06	2	69.710	- 0 05 11.82	0.04	2	69.710				11221
12393	-31	9900	7.49	K2	45 35.600	0.22	4	70.145	-32 03 07.69	0.13	4	70.145		17389		11222
12394	-51	7012	8.0	K0	45 41.056	0.03	4	69.698	-52 21 06.48	0.22	4	69.698				11223
12395	-13	3598	8.6	K0	45 59.713	0.02	2	70.746	-14 08 39.98	0.07	2	70.746				11224
12396	-35	8201	8.1	K2	46 04.706	0.09	4	70.177	-36 18 33.96	0.02	4	70.177				11225
12397	-50	7289	8.2	K5	12 46 05.126	0.13	4	69.848	-51 07 09.13	0.03	4	69.848				1523
12398	-40	7501	9.1	K2	46 05.818	0.12	4	69.737	-40 47 44.86	0.10	4	69.737				1524
12399	-59	4474	7.9	*	46 15.181	0.14	4	69.714	-60 23 22.57	0.09	4	69.714				11226
12400	+25	2568	6.39	G5	46 20.433	0.28	7	70.762	+25 06 48.22	0.12	7	70.762	3021	17400		33021
12401	-22	3452	7.86	K2	46 22.166	0.09	3	68.702	-22 57 58.42	0.12	4	68.842			2953	11227
12402	- 0	2613	8.8	F5	12 46 23.788	0.47	2	70.903	- 1 13 55.04	0.25	2	70.903				11228
12403	+14	2549	5.64	A0	46 23.894	0.08	6	69.907	+14 23 42.31	0.10	6	69.907	3022	17401		33022
12404	- 8	3429	7.3	K0	46 24.635	0.12	2	71.389	- 8 56 51.39	0.34	2	71.389				11229
12405	-65	2025	8.3	M1	46 25.830	0.07	4	68.839	-66 18 55.73	0.20	4	68.839				19542
12406	-19	3577	8.7	A2	46 31.626	0.14	4	69.823	-20 20 09.15	0.11	4	69.823				11230
12407	- 4	3359	8.5	K2	12 46 34.093	0.31	2	71.437	- 5 10 20.72	0.05	2	71.437				11231
12408	- 2	3580	8.7	F0	46 35.607	0.11	2	71.451	- 3 25 37.29	0.37	2	71.451				11232
12409*	-16	3541	8.5	F2	46 48.982	0.39	2	70.884	-16 52 24.25	0.02	2	70.884				11233
12410	-45	8042	8.2	K2	46 49.524	0.10	4	70.228	-45 37 59.87	0.08	4	70.228				1525
12411	+ 2	2582	8.0	K2	46 59.984	0.25	2	70.862	+ 1 44 49.54	0.05	2	70.862				11234
12412	-49	7411	8.0	K0	12 47 04.298	0.03	4	70.272	-49 35 47.34	0.07	4	70.272				1526
12413	-15	3543	7.01	K2	47 07.975	0.15	2	70.903	-15 36 38.22	0.23	2	70.903		17414		11235
12414	-59	4482	9.0	G5	47 09.190	0.04	4	68.760	-59 43 56.04	0.12	4	68.760				11236
12415	-14	3587	7.02	M3	47 09.563	0.03	2	70.858	-14 48 24.10	0.07	2	70.858		17415		11237
12416	-33	8646	8.8	K5	47 11.310	0.08	4	70.264	-34 02 04.01	0.05	4	70.264				11238
12417	+ 2	2585	8.11	G5	12 47 11.534	0.10	2	70.776	+ 1 27 55.59	0.26	2	70.776		17416	2957	11239
12418	-27	8881	8.5	K2	47 14.726	0.11	4	69.254	-27 29 07.37	0.05	4	69.254				11240
12419	- 6	3659	6.87	F5	47 29.985	0.08	2	70.762	- 7 21 36.95	0.26	2	70.762		17423		11241
12420	-67	2093	8.7	K5	47 31.086	0.11	4	68.645	-67 51 26.91	0.19	4	68.645				19543
12421	-32	8965	7.9	K2	47 36.499	0.15	4	70.285	-33 20 16.79	0.10	4	70.285				11242
12422	-41	7431	8.7	F2	12 47 45.297	0.15	4	70.750	-41 25 27.21	0.18	4	70.750				1527
12423	-25	9466	8.4	F0	47 48.517	0.07	4	69.242	-26 23 12.42	0.14	4	69.242				11243
12424	- 1	2731	8.9	K5	47 49.730	0.16	2	70.705	- 1 33 10.79	0.33	2	70.705				11244
12425	-12	3707	7.56	K2	47 51.593	0.32	2	69.779	-12 45 45.30	0.06	2	69.779			2958	11245
12426	-33	8653	5.01	A0	47 57.889	0.02	133	70.976	-33 43 37.79	0.03	129	70.981	1331	17433	2959	31331
12427	- 9	3566	8.8	F5	12 47 58.046	0.14	2	70.859	-10 17 58.67	0.17	2	70.859				11246
12428	-34	8456	9.2	A0	48 02.997	0.07	6	71.411	-35 21 44.62	0.19	5	71.264				11247
12429	-52	5947	5.90	A3	48 05.389	0.14	6	69.777	-52 30 55.31	0.09	6	69.777	3023	17434	2960	33023
12430	- 2	3587	8.5	F8	48 09.441	0.09	2	69.825	- 3 26 06.85	0.11	2	69.825				11248
12431	-43	7917	8.5	K0	48 15.395	0.11	4	70.545	-43 44 39.39	0.07	4	70.545				1528
12432	+ 4	2661	8.5	G0	12 48 18.045	0.08	2	70.948	+ 3 47 08.07	0.17	2	70.948		17436		11249
12433	-16	3546	8.8	K2	48 24.865	0.54	3	71.400	-17 03 45.38	0.06	3	71.400				11250
12434	-46	8212	8.0	G5	48 25.175	0.13	4	70.669	-46 35 54.50	0.41	4	70.669				1529
12435	+ 4	2662	8.7	K5	48 25.579	0.01	2	70.881	+ 3 52 12.70	0.39	2	70.881				11251
12436	-36	8135	8.4	K2	48 27.161	0.12	4	70.675	-37 14 24.94	0.17	4	70.675				11252

12363 9.7m-9.8m, 0°3, 164°.
12375 SDS, 10.2m, 4°2, 142°.

12399 K0+A.
12409 9.2m-9.7m, 0°3, 60°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Deci 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12437	-29	9962	9.1	K0	12 48 34.821	0.22	3	69.956	-30 12 06.82	0.14	4	69.782				11253
12438	-57	5749	7.3	K2	48 38.612	0.05	4	68.763	-58 12 45.85	0.09	4	68.763				11254
12439	-6	3665	8.8	K0	48 38.956	0.00	2	70.863	-6 40 22.98	0.30	2	70.863				11255
12440	-11	3378	8.7	F0	48 43.260	0.06	2	70.859	-11 34 23.62	0.63	2	70.859				11256
12441f	-32	8983	8.6	G5	49 01.100	0.15	4	70.239	-33 04 26.15	0.09	4	70.239				11257
12442	-5	3585	8.6	K0	12 49 05.016	0.37	2	71.449	-5 51 41.52	0.56	2	71.449		17450		11258
12443	+1	2763	8.9	K5	49 05.513	0.22	2	72.203	+0 46 04.19	0.01	2	72.203				11259
12444	-18	3483	8.5	K5	49 15.688	0.04	2	71.777	-18 40 20.00	0.07	2	71.777				11260
12445	+28	2156	5.07	G0	49 15.835	0.08	12	70.401	+27 48 44.70	0.13	12	70.401	1332	17455	2963	31332
12446	-51	7070	8.0	K2	49 17.156	0.08	5	70.058	-51 40 22.55	0.10	5	70.058				1530
12447	-54	5355	9.0	F2	12 49 17.236	0.20	4	69.815	-54 35 30.29	0.24	4	69.815				11261
12448	-24	10571	8.0	K2	49 18.419	0.13	4	70.226	-24 26 07.45	0.07	2	70.636				11262
12449	-28	9747	8.3	K0	49 22.540	0.11	4	70.339	-28 27 29.94	0.19	4	70.339				11263
12450	-84	407	5.38	K0	49 31.188	0.02	230	70.746	-84 51 08.33	0.03	226	70.733	919	17460	2964	60919
12450 SP					49 31.199	0.02	199	70.830	-84 51 08.34	0.04	192	70.816	919	17460	2964	70919
12451	-35	8243	8.9	K0	12 49 31.919	0.17	4	70.715	-35 39 51.27	0.19	4	70.715				11264
12452	-0	2622	7.8	K5	49 38.221	0.15	2	71.733	-0 39 26.66	0.53	2	71.733				11265
12453	+17	2551	6.53	K5	49 43.054	0.10	7	70.947	+17 20 43.92	0.09	7	70.947	1333	17464	2965	31333
12454	+2	2593	7.9	G5	50 00.814	0.31	2	72.240	+2 12 54.29	0.25	2	72.240				11266
12455*	-38	8056	8.01	K2	50 01.054	0.02	4	70.760	-39 02 25.97	0.06	4	70.760		17470		11267
12456	-63	2441	9.4	F8	12 50 02.840	0.07	4	70.346	-64 08 16.36	0.09	5	70.555				19544
12457	-62	2949	8.3	K0	50 03.984	0.14	4	70.281	-62 24 40.05	0.21	4	70.281				11268
12458	-7	3501	8.6	K2	50 09.476	0.13	2	72.214	-8 26 14.60	0.35	2	72.214				11269
12459	-48	7753	4.35	K2	50 16.295	0.08	6	70.164	-48 40 18.29	0.10	5	70.109	3024	17473	2966	33024
12460	-42	7950	8.5	K2	50 17.132	0.07	6	70.789	-43 11 06.34	0.10	4	70.791				1531
12461	-55	5266	7.8	K0	12 50 20.228	0.09	4	69.812	-55 55 20.44	0.23	4	69.812				11270
12462	-77	880	8.05	K2	50 25.540	0.10	4	69.854	-77 45 57.13	0.30	4	69.854		17477		19545
12462 SP					50 25.547	0.11	3	70.738	-77 45 56.75	0.12	3	70.738		17477		19545
12463	-22	3465	8.6	G5	50 26.397	0.20	4	70.208	-22 53 41.31	0.07	4	70.208				11271
12464	-12	3712	8.9	G5	50 29.987	0.25	2	72.406	-13 02 09.98	0.11	2	72.406				11272
12465	-14	3596	7.61	F2	12 50 31.815	0.05	2	72.256	-14 41 40.29	0.25	2	72.256		17482		11273
12466	-15	3551	8.5	K0	50 33.972	0.12	2	72.434	-16 19 14.92	0.00	2	72.434				11274
12467	-29	9983	7.70	K0	50 34.725	0.16	4	70.590	-29 44 38.50	0.25	4	70.590		17483		11275
12468	-30	10188	8.4	K2	50 36.981	0.07	4	70.364	-31 04 39.30	0.07	4	70.364				11276
12469	-2	3593	6.15	F5	50 37.000	0.14	8	71.264	-3 16 54.45	0.05	8	71.264	3025	17487		33025
12470	-39	7893	4.34	A5	12 50 39.609	0.05	26	70.975	-39 54 26.79	0.05	26	70.975	482	17489	2969	30482
12471*	-47	7932	9.4	G5	50 41.457	0.19	4	70.835	-47 37 01.48	0.20	4	70.835				1532
12472*	-56	5482	8.0	G0	50 45.096	0.12	4	70.319	-57 23 08.82	0.13	4	70.319				11278
12473	-19	3593	8.6	K5	50 50.174	0.02	2	72.764	-19 36 09.01	0.15	2	72.764				11279
12474	-4	3373	8.8	G5	50 51.339	0.03	2	72.763	-4 43 56.67	0.16	2	72.763				11280
12475	-20	3734	8.6	K5	12 50 51.379	0.07	4	70.172	-21 01 36.24	0.09	3	69.737				11281
12476	+20	2772	6.56	G5	51 04.041	0.11	6	70.884	+19 45 13.14	0.10	6	70.884	3026	17499		33026
12477	-8	3446	8.9	K0	51 05.452	0.05	2	71.233	-9 20 49.95	0.40	2	71.233				11282
12478	+5	2690	8.2	K0	51 07.546	0.30	2	72.385	+4 30 33.74	0.30	2	72.385				11283
12479	-17	3726	6.84	A0	51 21.664	0.04	40	70.558	-17 45 59.69	0.05	41	70.526	1334	17506	2971	81334
12480	-46	8244	9.3	K2	12 51 22.881	0.09	4	70.769	-46 53 39.98	0.06	4	70.769				1533
12481	+3	2711	8.4	F8	51 37.854	-	1	72.383	+2 54 15.95	-	1	72.383				11284
12482	-56	5487	4.26	B3	51 38.306	0.05	7	70.856	-56 54 24.73	0.12	7	70.856		17512	2973	21050
12483	-56	5487	5.46	B3	51 39.556	0.06	6	71.980	-56 53 51.18	0.10	6	71.980		17513		21051
12484	-58	4584	4.84	B3	51 39.983	0.13	6	71.487	-58 52 32.23	0.21	6	71.487		17514		21052
12485	-10	3570	5.96	A0	12 51 42.032	0.04	2	72.285	-11 22 39.54	0.13	2	72.285		17515		11285
12486	-8	3449	4.91	M3	51 44.909	0.08	7	71.278	-9 16 04.26	0.16	7	71.278	1335	17516	2974	31335
12487	-36	8173	8.7	K2	51 46.935	0.09	5	71.239	-36 32 25.76	0.29	5	71.239				11286
12488	-12	3715	8.1	K0	51 48.546	0.02	3	72.574	-12 39 58.43	0.17	2	72.773				11287
12489	-19	3597	6.94	K2	51 50.893	0.07	5	70.204	-19 49 37.48	0.21	5	70.204	3028	17519		33028
12490	-6	3681	8.5	A3	12 51 51.090	0.33	2	72.242	-7 20 21.25	0.01	2	72.242		17520		11288
12491	-65	2071	8.3	K5	51 51.545	0.17	4	70.719	-65 45 15.12	0.19	4	70.719				19546
12492	-62	2960	8.1	F0	51 59.309	0.19	4	70.185	-63 22 11.36	0.10	4	70.185				11289
12493	-36	8176	9.1	K5	52 06.973	0.23	4	70.553	-37 07 47.55	0.09	4	70.553				11290
12494	-24	10598	8.1	K2	52 11.218	0.14	4	70.241	-25 09 22.35	0.07	4	70.241				11291
12495	-9	3584	8.3	F0	12 52 14.683	0.15	3	72.227	-10 09 47.89	0.20	2	72.267				11292
12496	-52	6024	8.0	G5	52 26.455	0.04	4	69.807	-53 14 57.13	0.04	4	69.807				11293
12497	-72	1320	7.34	K0	52 26.645	0.10	4	70.293	-72 45 42.52	0.16	4	70.293		17527		19547
12498	-12	3719	7.01	K0	52 29.594	0.10	2	71.725	-13 10 55.28	0.32	2	71.725		17528		11294
12499	-42	7975	5.55	K5	52 31.353	0.13	6	70.455	-42 38 41.55	0.16	6	70.455	3029	17529	2977	33029
12500	-27	8923	8.4	G5	12 52 32.544	0.06	4	70.208	-27 45 33.77	0.16	4	70.208				11295
12501	-70	1537	9.2	M0	52 34.382	0.07	4	70.104	-70 45 32.98	0.09	4	70.104				19548
12502	+2	2599	8.9	K0	52 35.903	0.01	2	72.203	+1 45 21.69	0.22	2	72.203		17530		11296
12503	+3	2714	7.5	G5	52 38.209	0.01	2	70.912	+3 19 11.00	0.22	2	70.912				11297
12504	-3	3375	7.24	G5	52 47.248	0.45	2	70.813	-4 14 02.51	0.14	2	70.813		17536		11298
12505	-29	10014	6.67	A2	12 52 49.639	0.10	6	69.740	-29 47 57.62	0.12	5	69.397	3031	17537		33031
12506	-30	10213	8.2	K5	52 56.175	0.16	4	69.758	-31 11 31.67	0.08	4	69.758				11299
12507	-73	1062	8.2	M1	52 56.379	0.06	4	69.876	-74 13 18.79	0.12	4	69.876				19549
12508	-33	8702	8.7	K0	52 57.955	0.10	5	69.667	-33 24 46.28	0.13	4	69.730				11300
12509	-51	7125	8.0	K5	52 59.226	0.18	4	70.480	-51 39 49.38	0.07	4	70.480				1534

12441 SDS, 11.7m, 2°S, 190°.
12455 8.3m-9.3m, 0°3, 301°.

12471 9.4m-11.3m, 1°9, 168°.
12472 SDS, 8.7m-9.3m, 1°5, 272°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	PK4	GC	N30	No*
12510	+ 4	2669	3.66	M0	12 53 04.297	0.03	67	71.845	+ 3 40' 06.33	0.04	67	71.845	484	17543	2979	30484
12511	+ 0	3002	6.88	K0	53 04.760	0.13	4	71.137	+ 0 19 33.01	0.06	4	71.137	3032	17542	2978	11301
12512	- 0	2630	8.8	K2	53 06.293	0.12	2	71.460	- 1 26 57.17	0.17	2	71.460				11302
12513	- 2	3597	7.9	F5	53 06.434	0.05	2	71.437	- 3 16 49.21	0.29	2	71.437				11303
12514	-61	3396	8.54	B9	53 12.383	0.08	4	69.875	-61 29 03.92	0.25	4	69.875		17547		11304
12515	-40	7579	8.5	K0	12 53 14.402	0.16	4	69.792	-40 43 34.67	0.16	4	69.792				1535
12516	-14	3605	6.10	A0	53 15.242	0.07	6	68.666	-15 03 22.92	0.15	6	68.666	3033	17548	2981	33033
12517	-44	8330	8.0	K2	53 17.880	0.18	4	70.177	-44 30 37.13	0.10	4	70.177				1536
12518	-19	3601	8.3	K0	53 24.847	0.23	3	68.773	-19 56 37.88	0.08	4	68.895				11305
12519	-55	5285	8.8	K2	53 25.716	0.10	4	69.732	-55 24 44.96	0.17	4	69.732				11306
12520	-10	3578	8.8	K5	12 53 26.030	0.29	2	70.583	-11 02 21.04	0.18	2	70.583				11307
12521	-59	4593	8.2	K5	53 26.561	0.14	4	69.781	-60 23 51.98	0.20	4	69.781				11308
12522	-58	4601	8.9	A2	53 31.626	0.11	4	69.338	-59 13 25.27	0.14	4	69.338				11309
12523	-42	7991	9.5	K5	53 32.599	0.04	5	70.313	-43 10 14.74	0.09	4	70.276				1537
12524	-17	3736	9.3	G0	53 33.866	0.14	2	71.432	-18 28 58.58	0.04	2	71.432				11310
12525	-50	7383	9.0	K0	12 53 34.646	0.13	4	69.828	-50 45 08.35	0.22	4	69.828				1538
12526	-74	999	8.9	K0	53 43.209	0.11	4	69.776	-75 22 11.97	0.09	4	69.776				19550
12526 SP					53 43.201	0.16	4	70.187	-75 22 12.10	0.22	4	70.187				19550
12527	-47	7971	9.0	G5	53 44.451	0.11	4	70.215	-48 02 22.41	0.17	4	70.215				1539
12528	-34	8528	8.5	K5	53 49.255	0.11	4	70.205	-35 21 47.04	0.10	4	70.205				11311
12529	-25	9509	8.5	G5	12 53 49.545	0.06	4	68.796	-26 18 57.33	0.16	4	68.796				11312
12530	-69	1732	8.9	K5	53 52.262	0.03	4	69.801	-69 32 51.52	0.11	4	69.801				19551
12531	-34	8530	8.0	K0	53 54.103	0.13	4	70.620	-34 34 10.00	0.07	4	70.620				11313
12532	-38	8111	9.2	K8	53 55.566	0.26	4	70.530	-38 32 26.34	0.15	4	70.530				11314
12533	-15	3558	8.4	K0	54 00.162	0.16	2	70.914	-16 27 21.86	0.16	2	70.914				11315
12534	-30	10231	8.5	K5	12 54 04.505	0.06	4	68.848	-30 48 43.36	0.07	4	68.848				11316
12535	-68	1801	8.6	K0	54 10.571	0.11	4	69.744	-68 54 21.76	0.15	4	69.744				19552
12536	-14	3613	8.5	K0	54 10.661	0.08	2	70.959	-14 50 20.13	0.28	2	70.959				11317
12537	-39	7937	7.7	K0	54 21.368	0.09	4	69.813	-39 30 56.11	0.07	4	69.813				11318
12538	- 0	2635	9.0	K2	54 22.488	0.13	2	70.884	- 0 49 59.61	0.82	2	70.884				11319
12539	-73	1064	8.4	K5	12 54 23.621	0.07	4	69.671	-73 36 22.16	0.14	4	69.671				19553
12540	-62	2969	8.6	A2	54 40.076	0.11	4	70.197	-63 23 12.07	0.16	4	70.197				11320
12541	-48	7814	8.9	K5	54 41.128	0.17	3	70.280	-48 39 59.56	0.16	3	70.280				1540
12542	+ 9	2696	6.77	F5	54 42.385	0.05	6	68.705	+ 8 33 49.60	0.08	6	68.705	3035	17579		33035
12543	- 8	3456	6.82	B9	54 42.739	0.01	2	69.873	- 8 38 26.92	0.21	2	69.873		17580		11321
12544	-67	2135	8.7	K2	12 54 48.597	0.04	4	69.353	-67 33 13.63	0.05	4	69.353				19554
12545	-31	9978	8.19	G5	54 52.782	0.16	5	69.748	-32 01 48.55	0.09	4	69.831		17584		11322
12546	+ 2	2604	6.99	F2	54 53.181	0.31	2	69.761	+ 1 41 53.06	0.05	2	69.761		17586		11323
12547	-20	3749	8.7	A2	55 07.424	0.09	4	69.253	-20 35 53.04	0.09	4	69.253				11324
12548	- 4	3384	8.8	A0	55 16.024	0.10	2	70.765	- 5 02 24.46	0.71	2	70.765				11325
12549	- 1	2746	9.0	F8	12 55 19.841	0.03	2	70.918	- 1 46 59.69	0.11	2	70.918				11326
12550	-57	5817	7.7	K0	55 20.955	0.12	4	69.325	-58 12 01.71	0.12	4	69.325				11327
12551	-45	8129	9.1	K5	55 23.340	0.06	4	69.707	-45 31 41.27	0.08	4	69.707				1541
12552	-22	3482	6.82	F2	55 29.359	0.11	3	69.301	-22 47 06.46	0.09	4	69.291		17595		11328
12553	-49	7523	8.9	K0	55 30.514	0.04	4	69.725	-49 52 34.20	0.10	4	69.725				1542
12554	-24	10641	8.0	K2	12 55 36.912	0.06	4	69.749	-24 53 42.64	0.18	4	69.749				11329
12555	-54	5390	9.0	K0	55 47.389	0.14	4	69.743	-54 55 02.00	0.18	4	69.743				11330
12556	-40	7601	8.5	K2	55 49.057	0.17	4	69.674	-41 23 46.34	0.10	4	69.674				1543
12557	-11	3403	7.9	M0	55 53.592	0.02	2	71.426	-12 14 36.56	0.65	2	71.426				11331
12558	- 0	2637	8.5	A2	55 53.617	0.07	2	70.846	- 0 46 55.85	0.17	2	70.846				11332
12559	-22	3483	8.6	K0	12 55 53.843	0.13	4	69.775	-23 02 02.65	0.18	4	69.775				11333
12560	-70	1542	8.8	K0	55 57.142	0.13	4	69.240	-71 05 24.15	0.19	4	69.240				19555
12561	- 6	3705	7.70	K0	56 00.243	0.16	2	70.743	- 6 40 43.45	0.22	2	70.743		17599	2988	11334
12562	- 2	3605	6.76	K2	56 05.349	0.13	2	71.703	- 2 38 01.97	0.19	2	71.703		17600		11335
12563	-80	683	8.9	F8	56 05.669	0.24	5	70.436	-81 03 52.45	0.16	5	70.436				19556
12563 SP					12 56 05.548	0.10	4	69.755	-81 03 52.22	0.25	4	69.755				19556
12564	- 2	3606	8.5	F2	56 15.376	0.11	2	71.438	- 3 15 47.40	0.41	2	71.438				11336
12565	-43	7985	7.52	K0	56 18.829	0.05	4	69.675	-43 26 03.77	0.10	4	69.675		17613		1544
12566	- 5	3605	7.3	A2	56 24.732	0.07	2	70.896	- 5 49 16.89	0.09	2	70.896				11337
12567	-27	8952	8.4	K0	56 25.751	0.10	4	70.243	-27 25 36.88	0.05	4	70.243				11338
12568	- 9	3595	7.7	G5	12 56 26.534	0.36	2	71.460	- 9 33 58.14	0.11	2	71.460		17617		11339
12569	+18	2682	4.96	M0	56 27.021	0.09	6	68.763	+17 40 43.36	0.19	6	68.763	3036	17616		33036
12570	-28	9822	8.2	K5	56 42.603	0.13	4	70.273	-29 12 26.54	0.29	4	70.273				11340
12571	-21	3639	8.3	K2	56 45.985	0.11	5	70.247	-21 51 30.56	0.16	4	70.000				11341
12572	-15	3568	8.1	K2	56 47.737	0.05	2	71.427	-16 15 50.97	0.04	2	71.427				11342
12573	- 4	3390	8.0	K2	12 56 48.527	0.13	2	70.926	- 4 38 14.10	0.28	2	70.926				11343
12574	-52	6086	8.7	G0	56 58.315	0.11	4	69.727	-52 43 54.51	0.16	4	69.727				11344
12575	-56	5529	8.3	K0	56 58.538	0.05	3	69.900	-57 15 03.41	0.22	3	69.900				11345
12576	- 3	3384	5.88	A0	57 04.749	0.02	162	70.966	- 3 32 33.27	0.02	161	70.959	1336	17631	2990	81336
12577	-19	3612	7.8	F8	57 08.592	0.04	4	69.852	-20 01 19.99	0.11	4	69.852				11346
12578	- 3	3385	8.6	K0	12 57 10.459	0.13	2	69.902	- 4 09 38.24	0.20	2	69.902				11347
12579	-78	783	9.1	G5	57 11.298	0.07	5	70.198	-78 44 11.23	0.20	5	70.198				19557
12579 SP					57 11.295	0.24	3	69.815	-78 44 10.71	0.27	3	69.815				19557
12580	-35	8347	8.5	K0	57 16.406	0.11	4	69.693	-35 59 01.00	0.16	4	69.693				11348
12581	-13	3633	8.1	K2	57 18.465	0.03	2	71.443	-13 55 11.69	0.14	2	71.443				11349

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12582	+ 0	3008	8.5	F8	12 57 19.520	0.29	2	71.444	+ 0 02' 20.30	0.19	2	71.444				11350
12583	-32	9076	8.7	K0	57 22.774	0.10	4	69.700	-32 42' 17.98	0.17	4	69.700				11351
12584	-29	10060	8.9	K5	57 26.170	0.09	4	70.362	-30 20' 00.03	0.05	4	70.362				11352
12585	+ 1	2776	8.0	M0	57 30.955	0.10	3	71.898	+ 0 34' 37.13	0.20	2	71.773				11353
12586*	-23	10850	7.26	A2	57 32.211	0.14	4	69.698	-23 38' 41.96	0.16	4	69.698				11354
12587	+ 3	2719	8.8	F5	12 57 35.656	0.10	2	71.718	+ 2 39' 12.59	0.51	2	71.718				11355
12588	-42	8037	7.28	K0	57 39.409	0.15	4	69.727	-42 49' 08.26	0.12	4	69.727		17644		1545
12589	-65	2110	8.4	K2	57 40.683	0.09	4	69.765	-66 12' 44.48	0.08	4	69.765				19558
12590	-7	3521	8.6	K	57 47.600	0.01	3	71.994	- 8 22' 14.85	0.06	3	71.994				11356
12591	-32	9083	6.08	F2	57 47.822	0.07	6	68.730	-33 14' 07.40	0.07	6	68.730	3038	17645	2992	33038
12592	+ 4	2683	7.5	K5	12 57 57.614	0.02	2	70.882	+ 3 52' 22.77	0.30	2	70.882				11357
12593	-62	2981	7.50	K2	58 02.737	0.14	4	70.306	-62 45' 14.57	0.03	4	70.306		17653		11358
12594	-44	8385	9.0	K0	58 07.915	0.19	4	69.714	-44 45' 36.05	0.08	4	69.714				1546
12595	-35	8363	8.2	K0	58 11.250	0.12	4	69.740	-36 17' 52.66	0.11	4	69.740				11359
12596	-20	3766	8.0	F0	58 17.421	0.13	3	68.703	-21 09' 26.07	0.26	4	68.842				11360
12597	-78	784	9.0	F8	12 58 30.391	0.18	4	70.219	-79 05' 46.75	0.21	4	70.219				19559
12597 SP					58 30.237	0.24	4	70.250	-79 05' 46.95	0.31	4	70.250				19559
12598	-46	8334	9.0	K0	58 32.311	0.10	5	69.709	-47 01' 00.85	0.09	4	69.783				1547
12599	+ 5	2702	8.2	A5	58 35.750	0.15	2	70.708	+ 4 37' 38.80	0.01	2	70.708				11361
12600	-15	3578	8.7	K5	58 38.675	0.01	2	71.444	-15 31' 29.86	0.29	2	71.444				11362
12601	-17	3752	8.2	K2	12 58 43.169	0.09	2	71.437	-17 36' 47.48	0.25	2	71.437				11363
12602	-7	3525	8.7	G5	58 44.091	0.06	2	71.448	- 8 10' 14.37	0.06	2	71.448		17669		11364
12603	-10	3592	8.6	F5	58 46.658	0.10	2	71.455	-10 53' 16.04	0.47	2	71.455				11365
12604	-47	8036	8.5	K0	58 48.978	0.04	4	69.792	-48 12' 56.41	0.13	4	69.792				1548
12605	-70	1548	3.63	K2	58 48.998	0.02	127	71.136	-71 16' 47.50	0.03	126	71.135	487	17672	2996	30487
12605 SP					58 48.981	0.09	46	71.301	-71 16' 47.54	0.14	43	71.327	487	17672	2996	30487
12606	-36	8257	9.1	K2	58 49.725	0.07	5	70.622	-37 00' 03.47	0.24	4	70.510				11366
12607	+ 2	2614	7.63	M0	58 57.158	0.06	2	70.918	+ 1 47' 20.82	0.02	2	70.918		17676	2997	11367
12608	-84	418	8.5	K2	59 02.628	0.14	5	70.088	-85 06' 05.03	0.32	5	70.088				19560
12608 SP					59 02.722	0.29	3	70.202	-85 06' 04.20	0.23	3	70.202				19560
12609	-50	7458	8.0	K0	12 59 03.134	0.12	4	69.761	-50 48' 03.59	0.16	4	69.761				1549
12610	-8	3471	8.7	F0	59 04.114	0.03	2	69.818	- 9 22' 19.42	0.14	2	69.818				11368
12611	-37	8308	8.5	G5	59 10.523	0.05	4	70.150	-38 02' 12.98	0.09	4	70.150				11369
12612	-55	5337	7.5	K0	59 18.985	0.10	4	69.342	-56 19' 59.38	0.18	4	69.342				11370
12613	-33	8773	8.9	K0	59 33.614	0.11	4	69.723	-33 29' 57.32	0.19	4	69.723				11371
12614	-60	4395	8.17	F0	12 59 38.018	0.02	4	69.922	-61 03' 47.53	0.09	4	69.922		17684		11372
12615	-27	8984	6.81	K0	59 39.576	0.09	6	69.801	-28 01' 03.87	0.12	6	69.801	3040	17686		33040
12616	+11	2529	2.95	K0	59 40.824	0.06	19	70.270	+11 13' 39.24	0.09	19	70.270	488	17687	2999	30488
12617	-34	8597	9.0	K2	59 46.183	0.08	4	70.217	-34 50' 48.68	0.19	4	70.217				11373
12618	-55	5343	8.2	K2	59 46.452	0.08	4	69.714	-55 24' 24.03	0.15	4	69.714				11374
12619	-64	2124	9.0	A5	12 59 51.317	0.11	4	69.840	-64 30' 57.89	0.06	4	69.840				19561
12620	-31	10033	8.6	K2	59 52.076	0.15	4	68.867	-31 30' 35.78	0.13	4	68.867				11375
12621	-40	7640	8.0	K0	59 53.205	0.11	4	69.748	-40 26' 14.09	0.17	3	69.863				1550
12622	-38	8191	8.6	K5	59 54.441	0.18	4	70.195	-39 14' 56.17	0.10	4	70.195				11376
12623*	-79	717	8.13	F0	13 00 00.005	0.11	4	69.727	-79 57' 02.57	0.21	4	69.727		17691		19562
12623 SP					12 59 59.958	0.15	4	69.717	-79 57' 02.45	0.11	4	69.717		17691		19562
12624	-17	3757	8.4	K2	13 00 12.319	0.19	2	70.794	-18 10' 11.29	0.18	2	70.794				11377
12625	- 0	2647	8.7	K5	00 14.762	0.11	2	69.885	- 0 31' 33.39	0.05	2	69.885				11378
12626	-13	3644	8.6	F5	00 15.638	0.12	2	71.392	-14 19' 06.42	0.06	2	71.392				11379
12627	-26	9486	8.3	K2	00 18.073	0.06	4	68.802	-27 14' 05.66	0.06	4	68.802				11380
12628	-18	3533	7.9	F2	13 00 22.800	0.04	2	70.728	-18 48' 32.34	0.06	2	70.728		3000		11381
12629	-53	5445	8.4	K0	00 25.280	0.09	4	69.323	-54 19' 18.19	0.04	4	69.323				11382
12630	-45	8190	8.5	K0	00 31.237	0.08	4	69.714	-45 45' 40.07	0.11	4	69.714				1551
12631	-43	8025	8.5	G5	00 34.818	0.11	4	69.715	-43 36' 40.67	0.03	4	69.715				1552
12632	- 2	3620	8.8	G5	00 42.545	0.10	2	70.926	- 2 41' 44.90	0.12	2	70.926				11383
12633	-29	10095	8.5	K0	13 00 43.446	0.11	3	69.340	-29 35' 25.76	0.06	4	69.320				11384
12634	-12	3743	8.8	K5	00 44.602	0.64	2	71.716	-12 42' 46.33	0.13	2	71.716				11385
12635	-48	7890	9.4	K0	00 46.004	0.10	4	69.779	-48 45' 55.86	0.16	4	69.779				1553
12636	-18	3534	8.8	F0	00 48.373	0.05	2	70.906	-19 24' 29.73	0.08	2	70.906				11386
12637	-53	5450	8.4	G5	00 53.861	0.08	4	69.760	-53 33' 28.60	0.12	4	69.760				11387
12638	-10	3599	8.1	G5	13 00 59.688	0.15	2	70.708	-11 18' 49.70	0.26	2	70.708				11388
12639	-15	3589	8.1	F8	01 00.249	0.01	2	69.847	-16 04' 05.24	0.12	2	69.847		3003		11389
12640	-75	846	8.7	F2	01 05.458	0.11	4	69.275	-76 22' 52.62	0.29	3	69.654				19563
12640 SP					01 05.402	0.26	4	69.664	-76 22' 52.84	0.21	4	69.664				19563
12641	-23	10882	7.62	K0	01 14.030	0.10	4	69.644	-24 14' 57.61	0.20	4	69.644		17713		11390
12642	- 4	3408	7.50	K0	13 01 14.672	0.02	2	70.835	- 4 53' 30.93	0.04	2	70.835		17714	3004	11391
12643	-65	2141	8.5	G5	01 17.145	0.12	4	69.253	-65 39' 13.30	0.12	4	69.253				19564
12644	-38	8211	8.9	G0	01 33.185	0.08	4	69.740	-38 43' 18.22	0.10	4	69.740				11392
12645	-51	7230	9.4	G5	01 36.507	0.01	4	69.358	-51 54' 37.91	0.43	4	69.358				1554
12646	-24	10690	8.7	K7	01 37.167	0.05	4	69.735	-25 03' 45.65	0.14	4	69.735				11393
12647	-27	9006	6.90	A0	13 01 40.551	0.06	4	69.810	-28 08' 17.67	0.09	4	69.810		17723		11394
12648	-33	8800	8.9	G0	01 42.591	0.15	4	69.699	-33 52' 55.51	0.08	4	69.699				11395
12649	-25	9585	7.5	K2	01 43.132	0.18	4	69.868	-26 12' 47.99	0.20	4	69.868				11396
12650	-52	6144	8.2	K0	01 44.940	0.09	4	69.776	-52 52' 46.36	0.15	4	69.776				11397
12651	-37	8338	8.6	K0	01 45.630	0.09	4	69.751	-37 31' 30.04	0.17	4	69.751				11398

12586 A 8728, 7.9m-8.1m, 0th1.12623 8.9m-8.9m, 0th5, 186°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12652	-1	2764	9.0	F8	13 01 48.118	0.09	2	70.721	-1 42 20.22	0.00	2	70.721				11399
12653	-68	1828	7.9	K5	01 51.811	0.13	4	69.716	-69 19 42.80	0.16	4	69.716				19565
12654	-22	3496	8.6	G0	01 52.112	0.12	6	70.997	-22 33 30.00	0.09	5	70.949				11400
12655	-39	8028	8.9	K0	02 01.755	0.12	5	69.689	-39 29 49.35	0.08	4	69.757				11401
12656	+0	3015	7.8	K2	02 04.531	0.04	2	70.855	-0 27 37.31	0.27	2	70.855				11402
12657	-7	3540	7.8	K0	13 02 10.551	0.42	2	70.723	-8 18 11.43	0.07	2	70.723				11403
12658	+1	2786	7.19	K0	02 11.039	0.02	2	70.923	+0 33 49.44	0.06	2	70.923		17734		11404
12659	-20	3771	7.5	A3	02 11.689	0.08	4	69.794	-21 15 07.58	0.11	4	69.794				11405
12660	-46	8383	6.52	F2	02 13.386	0.09	6	68.769	-46 50 55.70	0.09	6	68.769	3042	17736		33042
12661	-41	7575	8.7	K0	02 21.975	0.11	5	70.273	-41 30 22.15	0.17	4	70.225				1555
12662	-72	1341	8.8	G5	13 02 26.439	0.06	4	69.706	-72 31 55.37	0.11	4	69.706				19566
12663	-49	7626	8.0	K5	02 37.275	0.13	4	69.722	-49 35 02.02	0.15	4	69.722				1556
12664	-7	3542	8.7	F5	02 45.472	0.19	2	70.881	-7 52 54.67	0.28	2	70.881		17741		11406
12665	-16	3597	7.5	K2	02 47.476	0.01	2	70.933	-16 44 12.21	0.03	2	70.933				11407
12666	-5	3625	8.3	K0	02 50.318	0.05	2	70.948	-5 57 21.63	0.46	2	70.948				11408
12667	-1	2768	8.3	F0	13 02 52.910	0.16	2	71.414	-2 17 23.79	0.03	2	71.414				11409
12668	-34	8638	7.8	K0	03 00.426	0.08	4	70.507	-34 50 39.79	0.14	4	70.507				11410
12669	-11	3437	8.6	F8	03 04.871	0.22	3	72.551	-12 06 08.92	0.05	3	72.551				11411
12670	-6	3731	8.9	K0	03 05.334	0.25	2	70.393	-6 53 30.97	0.27	2	70.393				11412
12671	+4	2690	8.06	F5	03 12.661	0.03	2	70.716	+4 21 31.07	0.15	2	70.716		17745		11413
12672	-30	10328	8.9	K5	13 03 13.235	0.12	3	70.655	-31 17 33.96	0.11	4	70.307				11414
12673	-13	3651	7.23	K5	03 13.335	0.11	5	72.261	-13 50 39.74	0.12	4	72.289	3043	17746	3006	11415
12674	-47	8088	4.96	B3	03 22.068	0.06	6	70.777	-48 11 44.77	0.08	6	70.777		17750		21053
12675	-63	2535	9.0	A3	03 24.836	0.13	4	69.797	-64 17 34.28	0.25	4	69.797				19567
12676	-50	7517	9.3	K5	03 27.410	0.18	4	70.324	-51 19 39.03	0.47	4	70.324				1557
12677	-25	9605	8.8	K5	13 03 27.704	0.15	4	70.032	-25 44 18.07	0.21	4	70.032				11416
12678	-56	5577	8.4	K0	03 29.372	0.15	4	69.832	-56 58 04.27	0.11	4	69.832				11417
12679	-82	561	8.32	G0	03 31.236	0.22	4	70.245	-82 27 13.76	0.18	4	70.245		17754		19568
12679	SP				03 31.233	0.11	4	70.823	-82 27 13.99	0.24	4	70.823		17754		19568
12680	-50	7519	7.5	M0	03 35.665	0.08	4	70.247	-50 46 56.02	0.10	4	70.247				1558
12681	-41	7588	9.2	K2	13 03 36.562	0.07	4	70.802	-41 47 41.41	0.22	4	70.802				1559
12682	-3	3406	8.3	G0	03 38.447	0.08	2	72.267	-4 02 34.14	0.08	2	72.267				11418
12683	+4	2692	8.5	K0	03 41.606	0.10	4	72.925	+4 12 50.85	0.38	3	73.173		17760		11419
12684	+3	2735	8.7	K0	03 43.541	0.25	2	72.848	+2 58 00.03	-	1	72.462				11420
12685	-40	7682	5.74	K0	03 44.618	0.13	6	68.846	-41 19 15.70	0.10	6	68.846	3044	17763	3009	33044
12686	-31	10075	9.0	K2	13 03 44.795	0.04	4	70.738	-32 16 56.78	0.11	4	70.738				11421
12687	-14	3644	7.21	K0	03 48.339	0.09	2	72.679	-14 38 55.93	0.13	2	72.679		17765		11422
12688	-4	3419	8.4	K0	03 50.700	0.18	2	72.413	-4 34 42.90	0.12	2	72.413				11423
12689	+21	2487	6.04	F5	03 54.911	0.04	50	71.051	+21 25 15.48	0.04	50	71.051	1339	17767	3010	81339
12690	+12	2552	8.8	F5	03 55.225	0.18	4	71.462	+12 11 41.39	0.34	4	71.462				26883
12691	-58	4691	7.12	K0	13 03 57.711	0.04	4	70.351	-58 32 17.60	0.16	4	70.351		17772		11424
12692	-49	7644	4.40	B3	03 58.688	0.06	22	70.687	-49 38 20.37	0.07	22	70.687	489	17773	3011	30489
12693	-20	3775	8.6	G0	04 00.806	0.11	5	71.158	-20 54 58.41	0.12	5	71.158				11425
12694	-26	9525	8.9	F8	04 10.886	0.08	4	70.546	-26 30 08.63	0.11	4	70.546				11426
12695	-35	8442	8.24	K2	04 13.086	0.10	4	71.213	-35 59 47.51	0.14	4	71.213		17776		11427
12696	-83	510	9.5	K0	13 04 13.397	0.18	4	70.923	-83 30 47.30	0.35	4	70.923				19569
12696	SP				04 13.248	0.30	3	71.101	-83 30 47.42	0.29	3	71.101				19569
12697	-74	1020	8.2	G5	04 14.585	0.09	4	71.077	-75 19 29.03	0.23	4	71.077				19570
12697	SP				04 14.479	0.62	3	70.784	-75 19 28.74	0.33	3	70.784				19570
12698	+0	3020	9.0	K0	04 19.891	0.05	2	72.865	+0 04 38.63	0.36	2	72.865				11428
12699	-7	3551	8.8	F2	13 04 22.192	0.07	2	72.823	-7 46 15.96	0.14	2	72.823				11429
12700	-19	3635	8.3	K0	04 23.213	0.08	2	72.289	-19 52 24.85	0.17	2	72.289				11430
12701	-45	8244	8.6	G5	04 32.164	0.08	5	71.210	-45 28 39.85	0.23	4	70.974				1560
12702	-52	6194	5.96	B9	04 39.092	0.06	26	69.999	-53 11 33.61	0.06	26	69.999	1340	17783	3014	31340
12703	-79	721	8.2	K2	04 44.559	0.08	4	69.743	-79 50 48.46	0.07	4	69.743				19571
12703	SP				13 04 44.391	0.20	5	70.974	-79 50 47.90	0.34	5	70.974				19571
12704	+28	2185	4.90	K5	04 46.864	0.25	6	71.464	+27 53 31.83	0.27	6	71.464	3045	17787	3015	33045
12705	-46	8417	9.0	G5	04 49.214	0.05	5	71.311	-47 01 32.07	0.13	4	71.102				1561
12706	-29	10143	7.70	A0	04 54.034	0.13	4	70.332	-30 10 04.81	0.12	4	70.332		17789		11431
12707	-52	6202	9.0	G5	04 58.915	0.11	4	69.798	-53 19 35.37	0.09	4	69.798				11432
12708	-39	8062	8.0	K2	13 05 00.018	0.20	6	71.479	-39 46 38.63	0.11	6	71.479				11433
12709	+2	2626	7.9	F5	05 03.326	0.31	2	71.372	+1 44 29.65	0.04	2	71.372				11434
12710	-17	3774	8.4	G5	05 09.800	0.17	2	70.724	-17 44 15.24	0.01	2	70.724				11435
12711	-18	3543	8.0	K2	05 11.711	0.06	3	71.215	-18 46 08.18	0.03	2	70.752				11436
12712	-47	8109	8.5	K2	05 16.881	0.06	4	70.786	-47 25 21.81	0.13	4	70.786				1562
12713	-48	7942	8.8	K2	13 05 18.282	0.11	4	70.810	-48 54 16.30	0.10	4	70.810				1563
12714	-34	8668	8.1	G5	05 23.290	0.14	4	70.564	-35 14 03.77	0.06	4	70.564				11437
12715	-27	9047	8.0	K2	05 27.160	0.14	3	70.655	-27 56 16.71	0.07	4	70.307				11438
12716	+4	2695	8.6	A0	05 27.947	0.04	2	70.737	+3 31 21.81	0.23	2	70.737				11439
12717	-37	8397	7.8	K0	05 48.124	0.06	4	70.466	-37 49 38.28	0.17	4	70.466				11440
12718	-22	3512	8.6	A0	13 05 50.505	0.14	5	71.054	-23 24 45.59	0.08	5	71.054				11441
12719	-1	2777	8.2	F2	05 55.326	0.13	2	71.788	-2 24 45.71	0.08	2	71.788				11442
12720	-8	3491	5.70	K0	05 55.765	0.06	6	68.843	-8 43 02.34	0.10	6	68.843	3046	17805		33046
12721	-70	1565	8.6	K0	05 56.756	0.19	5	70.025	-71 04 06.95	0.09	5	70.025				19572
12722	-23	10920	7.5	F5	05 57.862	0.06	4	70.563	-23 33 20.14	0.43	4	70.563				11443

12675 SDS, 9.7m-9.9m, 0°5, 232°.

12711 11.0m, 2°1, 102°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12723	-42	8144	9.3	G5	13 05 58.427	0.18	4	70.190	-43 07 20.79	0.12	4	70.190				1564
12724	-4	3425	8.9	K5	06 04.003	0.00	2	70.727	-4 30 21.89	0.04	2	70.727				11444
12725	-59	4778	8.1	F0	06 08.656	0.04	4	69.707	-60 02 30.54	0.19	4	69.707				11445
12726	-5	3640	8.0	F8	06 13.565	0.21	2	69.914	-5 43 45.21	0.05	2	69.914				11446
12727	-32	9170	7.22	K0	06 14.246	0.11	4	70.474	-33 14 06.49	0.18	4	70.474		17809		11447
12728	-65	2181	7.7	K0	13 06 17.560	0.10	4	68.767	-66 16 36.23	0.10	4	68.767				19573
12729	+6	2697	6.91	G0	06 18.927	0.16	6	69.780	+5 28 44.67	0.12	6	69.780	3047	17811	3017	33047
12730	-12	3762	8.0	K0	06 19.334	0.07	3	71.875	-13 10 29.70	0.29	2	71.744		17812		11448
12731	-43	8085	8.5	K0	06 19.678	0.18	4	70.054	-43 42 41.92	0.13	4	70.054				1565
12732	-22	3515	5.11	K0	06 21.289	0.13	4	69.978	-22 51 04.91	0.06	4	69.978	3048	17813	3018	33048
12733	-57	5916	9.1	G5	13 06 21.617	0.07	4	69.788	-57 30 11.89	0.14	4	69.788				11449
12734	-28	9911	8.5	K2	06 25.432	0.19	4	70.324	-28 46 34.79	0.10	4	70.324				11450
12735	+2	2632	8.4	F5	06 26.447	0.13	2	70.911	+2 25 34.42	0.01	2	70.911				11451
12736	-44	8459	9.1	K5	06 26.555	0.10	4	70.477	-44 39 06.83	0.06	4	70.477				1566
12737	-31	10110	8.3	K2	06 33.696	0.18	4	70.063	-31 45 12.55	0.13	4	70.063				11452
12738	-27	9057	8.2	F8	13 06 36.983	0.06	4	70.473	-27 27 41.97	0.14	4	70.473				11453
12739	-49	7680	8.0	K0	06 44.307	0.15	4	70.205	-49 53 01.08	0.12	4	70.205				1567
12740	-19	3641	7.7	A0	06 49.328	0.49	2	71.732	-19 51 26.40	0.22	2	71.732				11454
12741	-66	2093	9.1	G0	06 52.219	0.14	4	68.849	-67 17 06.79	0.17	4	68.849				19574
12742	-35	8472	7.7	K0	06 55.648	0.07	4	69.777	-35 53 39.29	0.08	3	69.902				11455
12743	-35	8473	7.4	G5	13 07 00.583	0.17	4	69.780	-36 15 59.18	0.21	4	69.780				11456
12744	-15	3608	6.72	A2	07 02.908	0.19	2	71.731	-16 14 56.97	0.04	2	71.731		17820		11457
12745	-2	3638	8.3	F2	07 07.980	0.07	2	70.952	-3 07 22.30	0.20	2	70.952				11459
12746	-9	3636	6.20	K2	07 08.004	0.01	2	71.451	-10 03 47.56	0.06	2	71.451		17822		11458
12747	-6	3750	7.38	K0	07 09.998	0.02	2	70.806	-7 23 21.24	0.12	2	70.806		17823	3019	11460
12748	+17	2595	6.18	K0	13 07 20.239	0.21	6	69.415	+17 06 53.20	0.07	6	69.415	3049	17825	3020	33049
12749	-4	3430	4.46	A0	07 21.430	0.02	112	71.685	-5 16 21.99	0.03	110	71.676	490	17828	3021	30490
12750	-24	10745	7.9	G5	07 28.273	0.05	5	70.639	-25 16 17.12	0.10	4	70.489				11461
12751	-56	5618	9.0	K0	07 29.419	0.07	4	69.324	-56 34 41.71	0.17	4	69.324				11462
12752*	-34	8695	8.1	F0	07 33.579	0.15	4	69.761	-34 30 47.62	0.09	4	69.761				11463
12753	-40	7725	8.5	K0	13 07 35.642	0.07	5	69.917	-40 52 50.95	0.18	4	69.780				1568
12754	-31	10124	7.9	K0	07 40.652	0.14	4	70.460	-32 17 26.69	0.19	4	70.460				11464
12755	-14	3657	8.6	K5	07 41.558	0.09	2	69.863	-15 05 31.72	0.00	2	69.863				11465
12756	-21	3662	8.2	K0	07 43.166	0.11	4	70.302	-22 06 19.55	0.07	4	70.302				11466
12757	-59	4796	8.1	K2	07 46.018	0.16	4	69.307	-59 47 03.39	0.17	4	69.307				11467
12758	-10	3624	8.4	K0	13 07 54.371	0.15	2	69.709	-10 32 55.55	0.05	2	69.709				11468
12759	-89	37	6.56	M0	07 57.314	0.12	6	68.727	-89 31 16.83	0.22	6	68.727	3985	17838	3024	33985
12759 SP					07 58.741	0.08	6	70.467	-89 31 16.58	0.21	6	70.467	3985	17838	3024	53985
12760	+0	3030	8.4	K2	08 09.292	0.16	2	71.889	-0 09 11.03	0.11	2	71.889				11469
12761	-54	5470	8.3	K2	08 10.979	0.08	4	69.234	-55 14 47.05	0.11	4	69.234				11470
12762	-1	2781	8.6	G5	13 08 23.104	0.13	2	70.708	-2 27 48.74	0.07	2	70.708				11471
12763	-38	8311	8.4	M0	08 24.431	0.21	4	69.725	-38 44 11.53	0.09	4	69.725				11472
12764	-30	10391	8.7	K5	08 31.528	0.12	4	69.853	-30 51 15.74	0.11	4	69.853				11473
12765	-13	3663	8.0	K0	08 35.663	0.15	2	70.855	-13 58 36.39	0.09	2	70.855				11474
12766	-25	9650	8.6	K0	08 37.645	0.13	4	70.546	-26 23 11.90	0.11	4	70.546				11475
12767	-72	1357	8.8	G5	13 08 40.660	0.11	4	69.694	-73 21 10.02	0.11	4	69.694				19575
12768	-8	3502	8.9	G0	08 41.749	0.04	2	69.940	-9 18 54.82	0.01	2	69.940				11476
12769	-52	6276	7.30	M0	08 52.173	0.16	4	69.338	-52 32 48.75	0.20	4	69.338		17859		11477
12770	+3	2740	8.2	K0	08 52.176	0.40	2	71.402	+3 26 02.26	0.26	2	71.402				11478
12771	-69	1774	8.9	K5	08 53.725	0.14	4	69.872	-70 03 23.45	0.08	4	69.872				19576
12772*	-25	9653	6.48	A3	13 08 55.558	0.03	50	70.665	-26 17 10.79	0.04	49	70.635	1341	17861	3026	31341
12773	-34	8711	8.4	G0	08 57.161	0.13	4	69.654	-35 21 10.41	0.08	4	69.654				11479
12774	-44	8486	8.0	K2	09 02.828	0.05	4	69.691	-45 00 48.21	0.08	4	69.691				1569
12775	-62	3053	8.6	G5	09 02.882	0.13	4	69.853	-62 26 55.16	0.19	4	69.853				11480
12776*	-56	5629	8.1	K0	09 04.535	0.12	5	70.315	-57 06 40.99	0.21	5	70.315				11481
12777	-6	3760	8.6	F8	13 09 08.677	0.09	2	70.871	-6 47 06.10	0.13	2	70.871				11482
12778	-23	10950	7.6	K0	09 11.065	0.19	3	71.280	-24 18 13.61	0.03	4	70.775				11483
12779	-15	3611	8.6	K5	09 13.182	0.06	2	70.836	-16 14 54.40	0.23	2	70.836				11484
12780	-37	8437	4.89	G5	09 14.724	0.06	6	70.094	-37 32 17.08	0.05	6	70.094	3051	17869		33051
12781	-11	3457	8.3	G5	09 23.667	0.10	2	70.682	-12 08 14.64	0.25	2	70.682				11485
12782	-20	3787	7.8	K2	13 09 28.486	0.04	5	70.620	-20 37 09.09	0.17	4	70.465				11486
12783	+28	2193	4.32	G0	09 31.174	0.03	82	70.995	+28 08 10.29	0.05	80	70.966	492	17874	3027	80492
12784	-49	7724	8.0	K0	09 35.417	0.09	4	69.714	-50 12 41.47	0.14	4	69.714				1570
12785	+25	2610	6.46	K0	09 43.917	0.10	6	69.827	+24 31 24.57	0.08	6	69.827	3052	17877		33052
12786	-26	9574	8.7	K5	09 49.878	0.09	4	70.150	-27 18 10.84	0.13	4	70.150				11487
12787	-61	3506	8.8	G0	13 09 58.663	0.14	4	69.383	-61 37 36.39	0.14	4	69.383				11488
12788	-62	3066	9.1	A2	10 02.301	0.16	4	69.894	-63 02 06.54	0.06	4	69.894				11489
12789	-67	2213	8.0	A2	10 02.334	0.10	4	69.853	-68 14 02.56	0.10	4	69.853				19577
12790	+12	2565	5.82	K5	10 03.492	0.07	6	71.217	+11 49 16.50	0.11	6	71.217	3053	17884		33053
12791	-77	890	5.77	G5	10 03.497	0.07	6	69.754	-78 10 57.55	0.12	6	69.754	3054	17886		33054
12791 SP					13 10 03.514	0.14	6	70.022	-78 10 57.25	0.32	6	70.022	3054	17886		53054
12792	-83	517	9.04	F8	10 04.851	0.08	4	70.358	-84 11 53.35	0.25	4	70.358		17887		19578
12792 SP					10 04.919	0.05	4	70.201	-84 11 52.89	0.52	4	70.201		17887		19578
12793	-1	2784	8.0	K0	10 09.546	0.00	2	69.841	-2 00 00.63	0.12	2	69.841				11490
12794	-0	2668	7.3	M1	10 11.496	0.11	2	70.910	-1 29 36.38	0.12	2	70.910				11491

12749 A 8801, 8.2m, 7^h1, 341°.
12752 8.8m-9.0m, 0^h3, 310°.

12772 7.2m-7.3m, 0^h2.
12776 SDS, 8.5m-10.2m, 1^h9, 241°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
12795	-3	3426	8.4	K2	13 10 13.669	0.30	2	70.388	-3 37 47.17	0.17	2	70.388				11492
12796	-78	794	8.1	K5	10 14.790	0.13	5	70.566	-78 55 43.81	0.19	4	70.591				19579
12796	SP				10 14.782	0.06	4	69.758	-78 55 43.61	0.21	4	69.758				19579
12797	-43	8124	9.3	K0	10 21.185	0.13	4	69.668	-43 33 53.89	0.11	4	69.668				1571
12798	-67	2217	9.0	G0	10 21.503	0.23	4	69.838	-67 39 40.67	0.20	4	69.838				19580
12799	-51	7359	8.5	F0	13 10 25.425	0.09	4	69.793	-52 08 33.17	0.12	4	69.793				1572
12800	-22	3534	8.0	K5	10 29.748	0.14	4	70.236	-22 40 05.68	0.12	4	70.236				11493
12801	-74	1032	6.9	K2	10 33.947	0.03	4	70.548	-74 54 23.35	0.17	4	70.548				19581
12801	SP				10 33.905	0.22	3	70.771	-74 54 22.89	0.75	3	70.771				19581
12802	-8	3508	8.9	G5	10 36.326	0.17	2	71.437	-8 40 01.20	0.02	2	71.437				11494
12803	-4	3439	8.1	G5	13 10 37.581	0.01	2	70.739	-4 45 29.84	0.04	2	70.739		17894		11495
12804	-7	3566	8.7	F2	10 39.401	0.21	2	71.453	-7 40 07.06	0.01	2	71.453				11496
12805	-12	3779	7.52	F5	10 42.651	0.07	2	71.426	-13 12 21.63	0.18	2	71.426		17900		11497
12806	-2	3651	7.32	K2	10 46.328	0.16	2	71.422	-3 13 47.39	0.02	2	71.422			3031	11498
12807	-25	9676	8.2	G0	11 01.083	0.16	4	70.255	-26 15 02.68	0.16	4	70.255				11499
12808*	-48	8036	9.0	F0	13 11 01.463	0.15	4	70.045	-48 33 10.29	0.18	3	70.259				1573
12809	-39	8118	8.7	G5	11 03.156	0.15	4	69.757	-39 29 54.34	0.12	4	69.757				11501
12810	-26	9587	8.0	A0	11 03.289	0.04	4	70.187	-27 21 52.43	0.10	4	70.187				11500
12811	-58	4738	5.96	K0	11 04.462	0.11	6	69.480	-58 25 09.33	0.06	6	69.480	3055	17908		33055
12812	-34	8747	9.0	K2	11 22.682	0.14	3	70.792	-34 25 14.97	0.08	3	70.792				11502
12813	-54	5491	7.9	K0	13 11 22.935	0.17	4	69.653	-54 41 51.49	0.12	4	69.653				11503
12814	-5	3658	8.9	K0	11 23.734	0.08	2	69.852	-5 33 01.39	0.23	2	69.852				11504
12815	+2	2646	6.76	K2	11 24.471	0.11	2	70.904	+1 43 16.54	0.18	2	70.904		17915		11505
12816	-30	10424	9.0	K0	11 25.139	0.12	4	69.791	-31 20 41.15	0.06	4	69.791				11506
12817*	-15	3621	8.2	K0	11 29.242	0.03	2	70.930	-16 17 35.62	0.05	2	70.930				11507
12818	+0	3035	9.0	F2	13 11 32.140	0.06	2	70.941	+0 00 28.36	0.13	2	70.941				11508
12819	-24	10780	8.6	K5	11 35.705	0.21	3	69.308	-24 56 57.65	0.13	4	69.296				11509
12820	-34	8752	7.8	F5	11 36.647	0.08	4	70.024	-35 10 30.91	0.10	4	70.024				11510
12821	-33	8904	8.7	K0	11 39.533	0.17	4	70.032	-33 39 56.31	0.33	4	70.032				11511
12822	+1	2799	8.9	K0	11 43.464	0.04	2	70.908	+1 29 15.56	0.08	2	70.908				11512
12823	-46	8505	8.5	A5	13 11 43.944	0.21	4	70.479	-46 35 34.76	0.14	4	70.479				1574
12824	-27	9102	8.5	F5	11 49.558	0.06	4	68.883	-28 16 16.11	0.16	4	68.883				11513
12825	-67	2224	4.95	B8	11 49.773	0.02	133	71.049	-67 37 48.94	0.03	131	71.032	493	17927	3035	30493
12826	-35	8546	9.0	K1	12 07.388	0.15	4	69.772	-35 59 19.13	0.10	4	69.772				11514
12827	-14	3671	8.6	K0	12 09.363	0.34	2	71.415	-14 45 14.18	0.05	2	71.415				11515
12828*	-9	3648	8.7	F0	13 12 15.742	0.42	2	71.433	-10 10 06.07	0.07	2	71.433				11516
12829	-18	3564	8.9	K5	12 16.720	0.42	2	71.437	-18 46 14.35	0.12	2	71.437				11517
12830	-50	7616	8.7	K0	12 16.907	0.14	4	69.264	-50 42 15.79	0.22	4	69.264				1575
12831	-29	10214	7.4	K0	12 18.416	0.04	4	68.831	-29 55 01.73	0.08	4	68.831				11518
12832	-53	5526	9.0	G0	12 20.229	0.17	4	69.353	-53 25 44.36	0.07	4	69.353				11519
12833	-10	3636	7.84	K0	13 12 22.919	-	1	71.329	-11 05 03.13	-	1	71.329		17939		11520
12834	-42	8237	7.52	G5	12 29.154	0.21	4	70.528	-42 47 55.87	0.33	4	70.528		17940		1576
12835	+5	2728	8.1	M1	12 30.942	0.10	2	69.889	+4 46 53.64	0.12	2	69.889				11521
12836	-68	1858	8.2	K5	12 32.504	0.23	4	68.797	-69 17 12.19	0.26	4	68.797				19582
12837	-16	3627	9.1	A2	12 40.434	0.14	2	71.443	-17 12 26.02	0.19	2	71.443				11522
12838	-40	7777	8.0	G5	13 12 45.116	0.12	4	70.494	-40 52 38.40	0.07	4	70.494				1577
12839	-0	2672	8.7	G5	12 46.680	0.08	2	69.699	-1 28 55.52	0.10	2	69.699				11523
12840	-55	5456	8.4	K5	12 52.839	0.19	4	69.277	-56 05 29.07	0.12	4	69.277				11524
12841	-7	3572	8.2	G5	12 53.947	0.06	2	70.945	-7 47 30.04	0.47	2	70.945		17944		11525
12842	-41	7700	8.0	M1	12 54.102	0.05	4	70.624	-41 47 27.37	0.20	4	70.624				1578
12843	-37	8469	9.0	K0	13 12 54.165	0.22	5	71.214	-38 02 19.18	0.11	5	71.214				11526
12844	+3	2748	7.6	G5	12 59.721	0.13	2	70.888	+3 18 47.34	0.19	2	70.888		17946		11527
12845	+4	2709	8.8	K0	13 04.329	0.09	2	69.818	+3 48 39.81	0.06	2	69.818				11528
12846	-36	8434	8.9	K5	13 06.667	0.08	4	70.284	-36 24 38.38	0.13	4	70.284				11529
12847	-47	8183	8.8	G5	13 12.511	0.13	4	70.503	-48 12 03.88	0.17	4	70.503				1579
12848	-19	3653	5.32	K0	13 13 16.694	0.16	2	70.919	-19 40 42.10	0.01	2	70.919		17951		11530
12849	-3	3435	8.9	G5	13 27.794	0.01	2	70.859	-3 38 32.31	0.25	2	70.859				11531
12850	-22	3542	8.6	K0	13 31.802	0.08	4	69.711	-23 17 04.84	0.09	4	69.711				11532
12851	-64	2319	8.6	K0	13 43.318	0.03	4	69.275	-65 20 27.86	0.12	4	69.275				19583
12852	-0	2674	6.49	F0	13 51.313	0.16	4	70.442	-1 07 36.34	0.06	4	70.442	3058	17960	3040	11533
12853	-58	4770	9.0	G5	13 14 03.860	0.14	4	69.712	-58 29 50.28	0.16	4	69.712				11534
12854	-4	3453	8.0	G0	14 04.278	0.15	2	71.777	-5 18 34.82	0.07	2	71.777				11535
12855	-21	3684	7.9	K5	14 04.632	0.08	4	70.274	-21 31 31.73	0.08	4	70.274				11536
12856	-30	10457	5.36	K0	14 06.107	0.02	87	71.265	-31 14 32.46	0.03	83	71.266	1342	17968	3041	31342
12857	+20	2814	6.29	A3	14 06.537	0.10	6	69.922	+20 02 54.65	0.12	6	69.922	3059	17970	3042	33059
12858	-64	2325	8.7	K0	13 14 10.629	0.04	4	69.873	-64 46 20.69	0.09	4	69.873				19584
12859	-66	2146	7.9	K2	14 12.336	0.16	4	69.828	-66 41 27.39	0.08	4	69.828				19585
12860	-6	3776	8.16	F5	14 13.299	0.36	2	71.417	-6 40 16.70	0.03	2	71.417		17973		11537
12861	-29	10234	8.7	K2	14 13.615	0.17	5	70.908	-29 45 05.91	0.17	5	70.908				11538
12862	-45	8359	8.0	K2	14 15.059	0.09	4	70.770	-46 12 48.18	0.07	4	70.770				1580
12863	+2	2653	7.4	F5	13 14 18.649	0.30	2	70.821	+1 30 12.79	0.02	2	70.821				11539
12864	-43	8165	5.87	A3p	14 19.301	0.05	37	70.835	-43 42 57.80	0.05	37	70.835	1343	17978	3044	31343
12865	-12	3785	7.68	K2	14 19.749	0.33	2	71.772	-12 53 43.75	0.22	2	71.772		17979		11540
12866	-31	10215	8.6	K0	14 31.517	0.11	4	70.508	-32 20 10.41	0.13	4	70.508				11541
12867	-60	4573	8.5	F2	14 42.605	0.14	4	69.777	-60 44 51.12	0.10	4	69.777				11542

12808 9.5m-9.6m, 0°3, 205°.

12817 9.5m-9.5m, 1°2, 262°.

12828 9.5m-9.5m, 0°1.

CATALOG OF 23,001 STARS FOR 1950.0

413

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*	
12868	-9	3654	7.22	F0	13	14	49.735	0.11	2	71.346	-10	17	00.04	0.11	2	71.346	17990	3046	11543	
12869	-59	4889	7.4	K2	14	53.472	0.31	4	69.347	-60	08	03.02	0.08	4	69.347				11544	
12870*	+0	3040	6.32	F0	14	55.997	0.07	2	70.384	-0	24	46.32	0.41	2	70.384	17993			11545	
12871	-30	10468	9.1	K5	15	00.150	0.18	4	70.539	-30	36	41.67	0.12	4	70.539				11546	
12872	-54	5525	8.1	K2	15	03.336	0.11	4	69.844	-54	59	21.31	0.12	4	69.844				11547	
12873	+6	2722	5.01	M0	13	15	04.673	0.03	83	71.012	+5	43	58.14	0.03	81	70.984	1344	17995	3047	81344
12874	-7	3582	7.06	F8	15	07.003	0.03	2	70.888	-8	28	11.67	0.24	2	70.888	17996	3048		11548	
12875	-43	8180	9.4	K0	15	27.466	0.12	4	69.726	-43	41	32.16	0.14	4	69.726				1581	
12876*	-26	9633	8.2	F8	15	30.455	0.16	3	71.149	-26	34	45.36	0.03	4	70.677				11549	
12877	-24	10833	8.1	K2	15	34.534	0.07	4	70.327	-25	15	29.15	0.18	4	70.327				11550	
12878	-73	1128	8.7	K5	13	15	35.004	0.07	4	69.335	-73	33	18.13	0.02	4	69.335				19586
12879	-71	1458	6.07	K2	15	37.434	0.11	6	69.058	-71	46	20.90	0.06	6	69.058	3061	18004		33061	
12879 SP					15	37.379	0.10	32	71.408	-71	46	21.24	0.14	30	71.441	3061	18004		53061	
12880	-27	9145	6.98	G5	15	37.984	0.08	6	70.908	-28	04	08.44	0.16	6	70.908	3062	18005	3050	11551	
12881	-8	3527	8.9	K0	15	41.007	0.04	2	71.310	-9	18	49.12	0.23	2	71.310				11552	
12882	-17	3813	4.80	G5	13	15	45.496	0.05	24	70.878	-18	02	23.32	0.06	24	70.878	1345	18007	3051	31345
12883	-32	9275	9.0	G5	15	49.802	0.15	5	70.284	-32	49	40.41	0.08	4	70.239				11553	
12884	-28	9992	8.7	A5	15	58.902	0.17	4	70.303	-28	24	35.64	0.09	4	70.303				11554	
12885	-77	892	8.0	K2	16	02.796	0.09	4	69.706	-77	41	46.76	0.17	4	69.706				19587	
12885 SP					16	02.764	0.20	4	69.478	-77	41	46.96	0.19	4	69.478				19587	
12886*	-51	7425	7.8	F5	13	16	02.870	0.15	4	69.230	-52	23	31.59	0.15	4	69.230				11555
12887	-16	3635	8.0	G0	16	04.779	0.18	2	70.728	-16	52	15.87	0.41	2	70.728				11556	
12888	-55	5486	8.7	B8	16	04.900	0.09	4	69.312	-56	00	59.22	0.13	4	69.312				11557	
12889	-60	4587	8.0	K2	16	11.784	0.12	4	69.709	-61	06	31.78	0.10	4	69.709				11558	
12890	-22	3554	3.33	G5	16	11.949	0.03	54	71.338	-22	54	30.82	0.04	53	71.339	495	18012	3053	30495	
12891f	-63	2697	7.7	F5	13	16	14.330	0.11	4	69.282	-63	29	33.71	0.21	4	69.282				11559
12892	-37	8520	8.7	F5	16	17.579	0.16	4	69.693	-37	24	18.44	0.14	4	69.693				11560	
12893	+4	2721	6.56	A0	16	18.944	0.25	2	71.448	+3	57	00.95	0.05	2	71.448	18015	3054		11561	
12894	-57	5988	8.2	K0	16	19.006	0.18	4	69.319	-58	12	57.91	0.12	4	69.319				11562	
12895	-1	2798	8.8	F0	16	20.500	0.03	2	70.783	-2	16	07.95	0.26	2	70.783				11563	
12896	+3	2755	8.2	K2	13	16	21.401	0.03	3	72.236	+2	48	22.47	0.25	2	72.265				11564
12897	-19	3664	8.3	A0	16	22.889	0.13	2	71.452	-19	44	27.62	0.04	2	71.452			3055	11565	
12898	-0	2678	8.8	K0	16	24.244	0.07	2	71.429	-1	00	23.80	0.12	2	71.429				11566	
12899	-14	3690	8.9	G5	16	37.695	0.14	3	71.697	-15	18	17.28	0.17	3	71.697				11567	
12900	-29	10263	7.9	B8	16	56.144	0.10	4	69.298	-30	04	11.95	0.12	4	69.298				11568	
12901	-11	3490	8.1	K5	13	16	58.527	0.26	2	70.897	-12	13	16.89	0.34	2	70.897	18025			11569
12902	-5	3673	7.9	F2	17	08.700	0.13	2	70.775	-6	16	46.07	0.02	2	70.775				11570	
12903	-33	8976	8.5	K2	17	15.894	0.13	4	69.743	-34	19	01.86	0.17	4	69.743				11571	
12904	-48	8118	8.5	A5	17	27.106	0.13	4	70.656	-48	57	41.07	0.08	4	70.656				1582	
12905	+2	2660	8.1	F5	17	29.195	0.26	2	69.873	+1	52	17.91	0.30	2	69.873				11572	
12906	-40	7830	7.8	K2	13	17	32.739	0.13	4	70.460	-41	18	50.32	0.13	4	70.460				1583
12907	-52	6405	5.70	B3	17	34.532	0.06	6	70.792	-52	29	08.45	0.10	6	70.792	18034			21054	
12908	-42	8314	8.0	K0	17	35.133	0.08	5	71.206	-43	10	23.85	0.04	4	70.963				1584	
12909	-49	7835	9.6	K0	17	40.531	0.05	4	69.652	-50	18	08.57	0.17	4	69.652				1585	
12910	-33	8983	7.6	K5	17	41.279	0.09	4	70.563	-33	23	44.93	0.15	4	70.563				11573	
12911	-55	5504	6.20	B0	13	17	41.394	0.10	6	68.815	-55	32	19.41	0.16	6	68.815	3065	18036		33065
12912	-26	9649	8.2	K5	17	42.383	0.12	4	69.713	-26	58	56.80	0.09	4	69.713				11574	
12913	-36	8497	2.91	A2	17	46.064	0.03	79	71.100	-36	26	58.63	0.04	76	71.081	496	18039	3057	30496	
12914	-20	3808	8.1	F5	17	48.055	0.08	4	69.765	-20	37	06.37	0.04	4	69.765				11575	
12915	-9	3665	8.1	K0	17	50.280	0.19	2	70.727	-9	55	42.82	0.06	2	70.727	18042			11576	
12916	-45	8395	8.0	K0	13	17	50.416	0.02	4	70.755	-45	56	34.47	0.09	4	70.755				1586
12917	-62	3182	8.2	K0	17	53.421	0.19	4	68.807	-62	38	46.77	0.05	4	68.807				11577	
12918	-17	3826	8.4	K0	17	55.255	0.05	2	70.907	-18	09	44.84	0.01	2	70.907				11578	
12919	-6	3788	8.8	K0	17	58.170	0.10	2	69.874	-7	13	16.43	0.14	2	69.874				11579	
12920	-14	3698	8.2	G5	17	59.550	0.03	2	70.952	-14	30	37.94	0.03	2	70.952				11580	
12921	-80	686	7.9	G5	13	18	02.718	0.30	5	70.442	-81	02	50.81	0.17	5	70.442				19588
12921 SP					18	03.089	0.12	4	68.964	-81	02	50.70	0.28	4	68.964				19588	
12922	-10	3656	8.6	M1	18	06.956	0.20	2	70.966	-11	11	18.78	0.00	2	70.966				11581	
12923	-49	7843	8.3	K0	18	10.780	0.18	4	70.593	-49	26	15.89	0.14	4	70.593				1587	
12924	-39	8199	8.79	K5	18	17.107	0.12	5	71.004	-39	42	50.03	0.08	4	70.718	18054			11582	
12925	-23	11025	7.12	K2	13	18	20.770	0.10	3	68.771	-24	12	30.82	0.02	4	68.893	18055	3059		11583
12926	-4	3464	8.45	F5	18	24.643	0.26	2	71.430	-5	24	13.93	0.67	2	71.430	18057			11584	
12927	-46	8585	9.0	K0	18	32.555	0.12	4	71.036	-47	22	58.57	0.14	4	71.036				1588	
12928	-31	10276	9.1	K5	18	36.631	0.12	4	71.028	-31	58	57.95	0.06	4	71.028				11585	
12929	-18	3587	6.18	A0	18	48.118	0.13	2	70.433	-19	13	39.79	0.12	2	70.433	18066			11586	
12930	-35	8631	8.0	K2	13	18	48.299	0.13	4	70.744	-36	17	15.51	0.18	4	70.744				11587
12931	-41	7769	8.5	K2	18	49.836	0.18	4	71.017	-41	52	12.32	0.06	4	71.017				1589	
12932	-10	3660	8.1	K2	18	56.959	0.12	2	70.826	-11	29	07.48	0.04	2	70.826	18071			11588	
12933	-46	8595	9.2	G5	18	59.478	0.17	4	70.547	-46	36	55.06	0.15	4	70.547				1590	
12934	-51	7464	8.2	K0	18	59.524	0.10	5	70.232	-51	26	15.72	0.05	5	70.232				1591	
12935	+3	2761	8.0	K5	13	19	04.353	0.07	2	71.473	+3	06	56.10	0.19	2	71.473				11589
12936	-68	1902	8.8	K5	19	05.096	0.13	4	69.335	-68	39	56.90	0.12	4	69.335				19589	
12937	+2	2664	5.68	A0	19	08.887	0.05	6	69.387	+2	20	56.82	0.20	6	69.387	3067	18079		33067	

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
12940	-60	4627	4.62	B5	13 19 22.796	0.02	125	71.013	-60 43 37.16	0.03	124	71.012	1347	18087	3062	31347
12941	-35	8645	8.5	G5	19 23.847	0.25	5	70.875	-35 26 11.00	0.08	5	70.875				11591
12942	-37	8566	9.0	G5	19 24.457	0.17	3	69.561	-37 36 05.98	0.09	3	69.561				11592
12943	+ 0	3048	8.0	K0	19 34.049	0.02	2	71.451	+ 0 11 35.93	0.18	2	71.451				11593
12944	- 3	3453	8.2	F8	19 35.860	0.13	2	71.428	- 4 24 05.62	0.00	2	71.428				11594
12945	-30	10521	8.7	K2	13 19 39.927	0.10	4	68.841	-30 32 45.88	0.20	4	68.841				11595
12946	- 7	3599	8.5	G5	19 41.500	0.02	2	71.410	- 8 26 18.38	0.35	2	71.410				11596
12947	-25	9759	7.04	F5	19 42.841	0.06	4	69.725	-25 34 47.11	0.15	4	69.725		18092		11597
12948	-75	863	8.2	F5	19 46.854	0.06	4	69.804	-75 40 10.09	0.17	4	69.804				19590
12948	SP				19 46.886	0.20	4	69.995	-75 40 09.63	0.41	4	69.995				19590
12949	-22	3572	8.6	G0	13 19 48.858	0.09	4	69.703	-22 41 30.31	0.08	4	69.703				11598
12950	+ 0	3049	8.3	K0	19 54.904	0.01	2	69.896	- 0 19 03.84	0.35	2	69.896				11599
12951	-59	4938	8.26	G5	20 01.930	0.10	4	69.738	-59 57 57.96	0.29	4	69.738		18098		11600
12952	-47	8261	6.46	B5	20 02.600	0.05	6	69.784	-48 18 06.26	0.12	6	69.784	3068	18099	3063	33068
12953	-20	3816	8.4	G5	20 07.079	0.12	4	68.872	-21 09 11.85	0.12	4	68.872				11601
12954	-15	3656	8.8	K5	13 20 26.553	0.09	2	70.602	-15 40 01.84	0.05	2	70.602				11602
12955	-14	3708	8.1	K5	20 29.779	0.04	2	71.343	-15 09 13.01	0.07	2	71.343				11603
12956	-44	8612	8.4	K5	20 35.177	0.10	4	69.658	-45 15 37.39	0.07	4	69.658				1592
12957	- 4	3469	5.94	K0	20 43.207	0.05	6	68.776	- 4 39 48.62	0.12	6	68.776	3069	18109		33069
12958	- 3	3458	8.6	K2	20 52.064	0.17	2	70.762	- 3 43 56.56	0.24	2	70.762				11604
12959	-37	8588	8.8	K2	13 20 57.526	0.16	4	69.703	-38 06 56.25	0.14	4	69.703				11605
12960	-12	3808	8.2	K2	21 00.914	0.23	2	71.419	-13 23 17.37	0.05	2	71.419				11606
12961	-74	1057	4.96	K0	21 07.114	0.12	6	68.785	-74 37 34.88	0.14	6	68.785	3070	18116		33070
12961	SP				21 07.077	0.13	17	71.426	-74 37 34.83	0.11	16	71.458	3070	18116		53070
12962	-55	5531	8.0	K5	21 08.073	0.12	4	69.684	-55 39 56.47	0.10	4	69.684				11607
12963	-17	3841	8.7	F5	13 21 08.592	0.07	2	69.800	-17 59 34.04	0.08	2	69.800				11608
12964	-27	9200	8.3	K0	21 10.895	0.03	3	69.358	-28 06 36.70	0.07	4	69.334				11609
12965	-10	3670	8.11	F0	21 18.333	0.24	2	70.937	-10 36 37.08	0.18	2	70.937		18122		11610
12966	- 4	3470	8.2	K0	21 20.490	0.25	2	70.903	- 4 53 17.63	0.13	2	70.903				11611
12967	-38	8486	8.6	M0	21 29.692	0.16	5	69.891	-39 11 20.76	0.13	4	69.748				11612
12968	-53	5593	7.05	K0	13 21 30.011	0.11	4	69.357	-53 39 14.86	0.11	4	69.357		18124		11613
12969	-37	8596	7.27	K5	21 30.840	0.07	3	69.544	-37 46 22.60	0.19	3	69.544		18125		11614
12970	-42	8376	8.5	K5	21 37.703	0.26	4	70.018	-42 49 21.19	0.21	4	70.018				1593
12971	- 1	2815	8.3	G5	21 40.061	0.06	2	70.835	- 1 50 48.94	0.01	2	70.835		18128		11615
12972	-40	7872	9.5	K0	21 44.816	0.11	4	70.522	-40 53 24.11	0.11	4	70.522				1594
12973	-51	7496	8.6	K0	13 21 47.425	0.13	5	70.042	-52 07 06.89	0.09	5	70.042				11616
12974	-33	9018	8.7	K0	21 50.505	0.06	4	70.058	-34 10 32.55	0.08	3	70.276				11617
12975	-63	2743	5.46	F5	21 51.239	0.07	6	69.441	-64 13 29.34	0.11	6	69.441	3071	18132	3064	33071
12976	-32	9336	7.9	K0	21 53.414	0.23	5	70.682	-32 24 32.28	0.15	5	70.682				11618
12977	-67	2274	8.6	A0	21 53.589	0.17	4	69.755	-67 55 02.60	0.07	4	69.755				19591
12978	-32	9339	8.5	K5	13 22 00.096	0.11	4	70.063	-33 11 19.53	0.11	4	70.063				11619
12979	-35	8677	8.8	K2	22 02.104	0.10	4	70.226	-35 31 43.39	0.10	4	70.226				11620
12980	+ 5	2742	8.3	K5	22 10.689	0.21	2	70.947	+ 4 39 43.53	0.19	2	70.947				11621
12981	- 6	3807	8.0	K2	22 11.689	0.12	2	70.904	- 6 34 48.77	0.17	2	70.904				11622
12982	-50	7755	8.7	K5	22 16.449	0.11	4	69.303	-50 55 22.75	0.20	4	69.303				1595
12983	-37	8607	9.1	G	13 22 16.815	0.15	4	70.545	-38 12 17.03	0.08	4	70.545				11623
12984	-30	10556	8.3	G5	22 22.404	0.05	4	69.766	-30 56 17.41	0.05	4	69.766				11624
12985	-46	8628	8.5	K0	22 22.904	0.20	4	70.515	-47 22 23.60	0.15	4	70.515				1596
12986	-14	3717	7.51	A2	22 23.446	0.43	2	69.837	-15 22 19.89	0.18	2	69.837				11625
12987	-29	10319	8.3	A0	22 25.158	0.17	4	69.881	-30 07 00.86	0.16	4	69.881				11626
12988	-24	10892	8.2	K5	13 22 30.197	0.15	4	69.746	-25 07 29.73	0.13	4	69.746				11627
12989	-10	3672	1.21	B2	22 33.233	0.03	79	71.683	-10 54 04.17	0.03	75	71.655	498	18144	3066	30498
12990	-54	5588	8.0	K0	22 34.759	0.10	4	69.239	-54 24 01.29	0.15	4	69.239				11628
12991	- 8	3550	8.4	A2	22 37.383	0.22	2	70.757	- 8 31 33.45	0.18	2	70.757				11629
12992	-35	8686	8.9	G5	22 38.246	0.12	4	70.525	-36 00 20.71	0.08	4	70.525				11630
12993	+ 1	2813	7.8	K0	13 22 42.833	0.16	2	70.862	+ 1 06 35.96	0.28	2	70.862				11631
12994	+24	2578	5.75	A2	22 43.585	0.10	6	69.770	+24 06 51.61	0.06	6	69.770	3072	18147		33072
12995	-69	1843	8.8	K2	22 47.266	0.24	4	69.711	-70 16 49.47	0.21	4	69.711				19592
12996	-19	3681	8.4	F8	22 49.683	0.18	4	69.322	-19 55 06.94	0.17	4	69.322				11632
12997	-64	2402	8.5	K0	23 05.256	0.18	4	69.792	-65 22 46.63	0.03	4	69.792				19593
12998	+ 0	3053	8.8	K0	13 23 11.042	0.02	2	70.772	- 0 11 39.81	0.19	2	70.772				11633
12999	-39	8246	5.25	K0	23 13.531	0.07	6	69.772	-39 29 42.23	0.05	6	69.772	3073	18153	3067	33073
13000	-45	8460	8.5	G5	23 15.757	0.05	5	69.690	-45 47 18.53	0.04	4	69.759				1597
13001	-57	6054	8.8	G5	23 24.713	0.11	4	69.775	-57 28 53.10	0.26	4	69.775				11634
13002	-87	222	9.0	A2	23 26.073	0.05	4	69.694	-88 13 38.61	0.28	4	69.694				19594
13002	SP				13 23 25.794	0.22	4	68.966	-88 13 38.31	0.28	4	68.966				19594
13003	-25	9801	8.5	F8	23 26.127	0.22	3	70.043	-25 55 33.52	0.13	4	69.847				11635
13004	- 2	3684	7.29	K0	23 33.411	0.19	2	69.903	- 3 24 05.56	0.28	2	69.903			3070	11636
13005	-41	7824	8.0	K2	23 35.222	0.15	4	69.706	-41 35 25.58	0.22	4	69.706				1598
13006	+ 3	2772	8.8	K0	23 35.546	0.07	2	71.344	+ 3 09 27.55	0.03	2	71.344				11637
13007	- 0	2686	6.01	A3	13 23 37.437	0.08	6	69.083	- 0 55 58.82	0.07	6	69.083	3074	18163	3071	33074
13008	-60	4671	8.7	G5	23 37.749	0.07	4	69.731	-60 34 02.61	0.17	4	69.731				11638
13009	-66	2222	7.4	K0	23 38.009	0.06	5	70.514	-66 45 46.85	0.09	5	70.514				19595
13010	-15	3664	8.5	K2	23 38.273	0.29	2	71.222	-16 24 59.05	0.02	2	71.222				11639
13011	-62	3265	8.4	F5	23 44.990	0.11	4	69.873	-62 24 01.30	0.09	4	69.873				11640

12986 A 8893, 9.9m, 2°2, 35°.
12995 9.1m-10.0m, 1°5, 164°.

13000 SDS, 9.0m-9.8m, 1°3, 246°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
13012	-30	10571	8.3	K2	13 23 47.026	0.18	4	69.897	-31 11 27.33	0.08	4	69.897				11641
13013	-64	2408	8.9	A0	23 50.753	0.06	4	69.837	-64 49 17.09	0.35	4	69.837				19596
13014	-22	3592	8.6	K5	23 52.015	0.11	5	70.807	-22 58 20.50	0.07	5	70.807				11642
13015	-58	4878	8.6	G5	23 55.598	0.08	4	70.060	-59 12 51.22	0.16	4	70.060				11643
13016	+ 2	2676	9.0	K2	24 00.861	0.16	2	71.913	+ 1 59 34.31	0.23	2	71.913				11644
13017	-11	3516	5.59	K2	13 24 04.223	0.02	97	71.259	-12 26 53.61	0.03	95	71.250	1348	18168	3073	81348
13018	-34	8881	8.5	B9	24 10.554	0.09	4	69.713	-35 21 35.17	0.11	4	69.713				11645
13019	-72	1402	8.4	K5	24 14.407	0.07	4	69.752	-72 46 55.14	0.18	4	69.752				19597
13020	- 5	3694	7.95	A0	24 17.316	0.19	2	71.923	- 5 40 17.52	0.19	2	71.923		18172		11646
13021	-10	3677	8.7	F2	24 21.870	0.22	2	70.963	-11 04 47.87	0.02	2	70.963				11647
13022	-28	10074	8.4	A3	13 24 22.422	0.06	4	69.782	-28 48 11.90	0.08	4	69.782				11648
13023	-51	7532	8.5	K0	24 44.024	0.10	4	69.769	-51 38 56.26	0.11	4	69.769				1559
13024	-17	3851	8.9	K0	24 54.186	0.02	2	70.602	-17 46 24.58	0.16	2	70.602				11649
13025	-44	8661	7.30	K2	25 06.888	0.10	4	69.717	-44 48 37.18	0.10	3	69.822		18188		1600
13026	-70	1621	9.0	K5	25 21.636	0.21	4	69.206	-71 12 38.05	0.24	4	69.206				19598
13027	-43	8301	9.1	K0	13 25 23.074	0.11	4	69.728	-43 54 25.15	0.10	4	69.728				1601
13028	-51	1477	9.2	A0	25 29.183	0.09	4	68.804	-71 58 44.66	0.10	4	68.804				19599
13029	-49	7952	9.6	K2	25 30.654	0.13	4	70.196	-49 38 14.12	0.14	4	70.196				1602
13030	-20	3830	8.7	K2	25 33.597	0.10	4	69.292	-21 28 28.51	0.00	4	69.292				11650
13031	-74	1063	8.5	K0	25 37.181	0.10	4	69.278	-74 38 48.89	0.11	4	69.278				19600
13032	-10	3681	9.0	K5	13 25 39.602	0.02	2	70.841	-10 47 16.32	0.13	2	70.841				11651
13033	-35	8726	8.8	K5	25 40.684	0.10	4	69.776	-35 27 23.48	0.21	4	69.776				11652
13034	-24	10927	7.34	F5	25 41.373	0.14	3	70.012	-24 57 15.34	0.08	4	69.824		18205		11653
13035	- 0	2691	7.53	G5	25 44.182	0.03	2	70.831	- 0 34 42.41	0.17	2	70.831		18208		11654
13036	-26	9740	7.18	F8	25 44.510	0.11	4	69.859	-27 08 06.37	0.06	4	69.859		18209		11655
13037	-11	3523	8.8	A3	13 25 47.123	1.03	2	70.415	-12 22 13.52	0.58	2	70.415				11656
13038	-21	3721	8.5	K2	25 49.098	0.06	4	69.862	-22 10 05.50	0.23	4	69.862				11657
13039	-75	876	9.0	K0	25 50.124	0.12	4	70.227	-76 18 31.36	0.20	4	70.227				19601
13039 SP					25 50.027	0.19	3	70.069	-76 18 31.26	0.21	3	70.069				19601
13040	- 8	3562	8.4	K0	25 50.520	0.09	2	70.911	- 9 29 06.81	0.17	2	70.911		18211		11658
13041	+14	2621	5.16	G0	13 25 58.660	0.05	33	70.531	+14 02 30.94	0.08	33	70.531	1349	18212	3076	31349
13042	- 3	3476	8.0	A3	26 06.594	0.02	2	70.861	- 4 12 25.81	0.07	2	70.861				11659
13043	-48	8236	9.6	K0	26 17.439	0.14	4	70.219	-48 30 46.44	0.04	4	70.219				1603
13044	-29	10367	8.5	K5	26 23.868	0.03	4	69.836	-29 54 07.66	0.07	4	69.836				11660
13045	+ 5	2749	8.9	F8	26 29.442	0.18	2	72.218	+ 4 44 22.35	0.10	2	72.218				11693
13046	-34	8911	8.9	K0	13 26 29.905	0.10	4	69.795	-34 35 46.86	0.12	4	69.795				11661
13047	-52	6516	6.86	K0	26 31.901	0.05	4	69.313	-52 29 57.27	0.09	4	69.313		18224		11662
13048	+ 0	3065	8.2	F8	26 39.209	0.18	2	70.805	+ 0 22 38.25	0.03	2	70.805				11663
13049	+ 4	2751	8.1	K2	26 41.644	0.03	2	70.917	+ 4 07 46.35	0.15	2	70.917		18229		11664
13050	- 8	3566	8.9	K5	26 43.525	0.05	2	70.947	- 8 31 39.38	0.16	2	70.947				11665
13051	+11	2575	5.78	K0	13 26 44.204	0.12	6	69.148	+11 04 36.18	0.13	6	69.148	3076	18234		33076
13052	-38	8564	8.9	K5	26 45.039	0.11	5	70.297	-39 20 48.92	0.08	4	70.255				11666
13053	-17	3862	7.02	K2	26 46.916	0.09	3	71.022	-18 28 15.13	0.05	3	71.022		18235		11667
13054	-37	8661	9.0	F8	26 47.596	0.14	3	70.156	-38 15 11.40	0.01	3	70.156				11668
13055	-69	1863	9.1	M0	26 49.452	0.23	4	69.747	-69 45 19.41	0.15	4	69.747				19602
13056	-30	10611	8.6	K2	13 26 52.605	0.10	4	69.837	-31 07 48.23	0.07	4	69.837				11669
13057	-56	5788	7.86	A0	26 54.699	0.08	5	70.410	-56 24 59.50	0.12	5	70.410		18237		11670
13058	-45	8503	8.5	G0	26 58.238	0.17	4	70.067	-46 16 47.76	0.10	4	70.067				1604
13059	+ 2	2685	8.7	G0	27 00.262	0.37	2	71.421	+ 1 57 58.19	0.61	2	71.421				11671
13060	-28	10100	8.7	A3	27 05.380	0.15	4	69.817	-28 41 12.06	0.03	4	69.817				11672
13061	-32	9404	8.6	K2	13 27 05.889	0.18	5	70.811	-32 35 52.25	0.06	5	70.811				11673
13062	-25	9837	8.6	K0	27 09.223	0.04	5	70.724	-25 48 03.01	0.07	4	70.595				11674
13063	-14	3727	8.9	K0	27 10.632	0.07	2	71.452	-14 49 44.71	0.23	2	71.452				11675
13064	- 0	2696	8.8	K5	27 12.956	0.23	2	71.445	- 1 08 20.61	0.12	2	71.445				11676
13065	-55	5593	7.8	K0	27 14.697	0.08	4	69.830	-55 57 06.68	0.10	4	69.830				11677
13066	-10	3689	8.6	F5	13 27 15.997	0.01	2	71.460	-11 14 16.32	1.30	2	71.460				11678
13067	-19	3691	8.1	K0	27 17.803	0.06	4	70.231	-20 03 16.47	0.09	4	70.231		18245		11679
13068	-13	3716	8.7	K5	27 18.418	0.06	2	70.921	-13 44 37.37	0.02	2	70.921				11680
13069	-53	5643	7.6	K0	27 23.082	0.18	4	69.806	-53 40 30.05	0.12	4	69.806				11681
13070	-36	8617	8.3	K2	27 28.003	0.07	4	69.763	-36 39 29.41	0.16	3	69.883				11682
13071	+ 7	2655	6.29	K5	13 27 29.535	0.09	6	69.567	+ 7 26 11.52	0.17	6	69.567	3077	18249	3082	33077
13072	+ 1	2820	8.8	K0	27 34.266	0.16	2	70.743	+ 0 36 07.43	0.30	2	70.743				11683
13073	-23	11099	8.5	K0	27 35.325	0.18	4	70.303	-24 10 37.16	0.14	4	70.303				11684
13074	-78	816	7.78	K5	27 56.464	0.11	4	70.147	-78 49 03.95	0.08	4	70.147		18253		19603
13074 SP					27 56.494	0.19	4	69.747	-78 49 03.59	0.26	4	69.747		18253		19603
13075	-58	4920	8.5	G5	13 27 57.836	0.15	4	69.265	-58 33 07.68	0.22	4	69.265				11685
13076	-15	3680	8.3	K0	28 00.330	0.07	2	69.841	-15 57 54.22	0.05	2	69.841				11686
13077	-33	9104	8.1	K5	28 01.429	0.16	4	69.693	-33 49 54.52	0.13	4	69.693				11687
13078	-50	7837	8.2	K0	28 01.883	0.03	4	69.730	-50 46 02.07	0.14	4	69.730				1605
13079	-26	9766	7.9	K0	28 03.224	0.05	4	69.745	-27 21 13.60	0.04	4	69.745				11688
13080	- 7	3633	8.06	K5	13 28 16.734	0.04	2	70.846	- 7 36 21.50	0.08	2	70.846		18262		11689
13081	-56	5795	8.7	K2	28 18.200	0.09	4	69.233	-57 02 26.28	0.08	4	69.233				11690
13082	-62	3324	9.0	A2	28 25.034	0.09	4	69.719	-63 07 03.98	0.12	4	69.719				11691
13083	- 2	3698	8.8	K0	28 26.346	0.09	2	70.926	- 2 33 33.87	0.22	2	70.926				11692
13084	-12	3830	6.88	F0	28 33.527	0.23	2	71.415	-13 11 30.06	0.32	2	71.415		18270		11694

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
13085	-47	8383	7.56	K0	13 28 33.708	0.03	4	69.684	-47 53 44.57	0.11	4	69.684		18269		1606
13086	-1	2830	8.4	K2	28 35.664	0.14	2	70.817	-2 00 18.09	0.33	2	70.817		18271		11695
13087	-53	5655	8.1	K0	28 37.547	0.11	5	70.510	-54 15 18.89	0.22	5	70.510				11696
13088	-59	5018	8.0	G0	28 39.897	0.02	4	69.766	-60 10 54.34	0.10	4	69.766				11697
13089	-36	8641	9.1	K2	28 45.448	0.22	4	69.744	-37 20 08.87	0.14	4	69.744				11698
13090	-43	8350	8.5	G5	13 28 49.469	0.16	4	69.688	-43 45 46.35	0.06	4	69.688				1607
13091	-61	3769	8.86	M0	28 52.425	0.03	4	69.282	-61 44 00.72	0.10	4	69.282		18280		11699
13092	+5	2757	8.9	K5	28 52.652	0.19	2	70.918	+4 32 38.49	0.07	2	70.918				11700
13093	-51	7569	8.0	K2	28 56.046	0.19	4	69.335	-51 34 52.25	0.18	4	69.335				1608
13094	-30	10645	7.5	K0	28 58.768	0.03	4	68.827	-30 47 53.69	0.13	4	68.827				11701
13095	-25	9853	7.49	F5	13 29 05.478	0.07	3	69.892	-25 51 27.34	0.11	4	69.734		18282		11702
13096	-0	2700	8.9	K5	29 10.761	0.21	2	70.824	-0 58 55.15	0.16	2	70.824				11703
13097	-5	3713	8.2	K2	29 15.765	0.01	3	70.982	-5 45 27.32	0.11	3	70.982				11704
13098	-69	1873	7.9	K0	29 17.374	0.09	4	68.801	-70 10 37.19	0.11	4	68.801				19604
13099	-22	3615	8.6	G0	29 18.084	0.11	4	69.793	-22 38 11.93	0.07	4	69.793				11705
13100	-20	3840	9.1	F2	13 29 19.790	0.08	4	70.288	-20 41 38.43	0.16	4	70.288				11706
13101	-17	3877	5.93	A3	29 20.572	0.05	6	69.088	-18 28 18.54	0.09	6	69.088	3078	18287	3088	33078
13102	-5	3714	4.83	M0	29 21.579	0.09	7	69.015	-5 59 54.79	0.09	7	69.015	3079	18288		33079
13103	-77	900	8.9	K0	29 32.858	0.31	4	69.804	-77 36 15.42	0.27	4	69.804				19605
13103	SP				29 32.841	0.03	3	69.477	-77 36 14.62	0.41	3	69.477				19605
13104	-2	3703	8.5	F5	13 29 40.637	0.02	2	71.411	-3 18 32.80	0.07	2	71.411				11707
13105	-11	3535	8.0	F0	29 45.292	0.12	2	71.415	-12 24 22.67	0.18	2	71.415		18293		11708
13106	-46	8710	8.5	G5	29 48.139	0.16	4	69.674	-46 39 22.02	0.10	4	69.674				1609
13107	-28	10128	5.67	A0	29 48.259	0.11	6	69.604	-28 26 09.37	0.13	6	69.604	3080	18295	3089	11709
13108	-44	8709	9.02	K2	30 03.358	0.05	4	69.692	-45 16 25.82	0.05	4	69.692		18298		1610
13109*	-17	3881	9.0	F8	13 30 04.208	0.06	2	70.717	-17 30 07.47	0.09	2	70.717				11710
13110	-66	2255	7.9	K2	30 09.700	0.09	4	69.255	-66 28 35.68	0.18	4	69.255				19606
13111	-26	9790	8.6	G5	30 11.321	0.09	4	69.896	-27 05 45.54	0.06	4	69.896				11711
13112	-55	5618	8.1	G5	30 14.152	0.15	4	69.184	-56 04 31.15	0.09	4	69.184				11712
13113	-45	8531	9.1	K0	30 14.786	0.12	4	69.784	-46 07 48.73	0.04	4	69.784				1611
13114	-86	300	7.98	K0	13 30 18.952	0.10	4	69.718	-86 28 13.53	0.12	4	69.718		18308		19607
13114	SP				30 18.456	0.30	4	69.976	-86 28 13.73	0.08	4	69.976		18308		19607
13115	-63	2821	9.1	K0	30 18.996	0.16	4	69.212	-63 37 37.98	0.06	4	69.212				11713
13116	-18	3630	8.7	K2	30 19.577	0.06	3	70.734	-18 59 49.03	0.16	3	70.734				11714
13117	-9	3711	5.43	G5	30 19.763	0.08	6	68.730	-9 54 29.50	0.09	6	68.730	3081	18309	3092	33081
13118	-19	3696	7.4	G5	13 30 28.250	0.24	2	70.858	-19 44 01.07	0.32	2	70.858				11715
13119	-28	10138	8.7	K2	30 44.744	0.08	4	69.905	-29 18 41.37	0.10	4	69.905				11716
13120	-29	10428	9.1	M0	30 49.773	0.11	5	70.856	-30 22 32.58	0.09	4	70.761				11717
13121	-7	3642	7.66	G5	30 49.901	0.01	2	70.881	-8 10 46.03	0.06	2	70.881		18326		11718
13122	-58	4942	8.9	K0	30 55.380	0.05	4	68.778	-59 15 17.82	0.10	4	68.778				11719
13123	+1	2826	8.4	K5	13 30 56.296	0.07	2	70.895	+1 14 41.29	0.01	2	70.895				11720
13124	-42	8533	8.5	K2	31 13.471	0.09	4	69.728	-42 37 17.95	0.17	3	69.836				1612
13125	-40	7975	8.5	K0	31 16.065	0.05	4	69.792	-40 43 40.74	0.11	4	69.792				1613
13126	+3	2792	8.5	K5	31 17.486	0.01	2	70.788	+3 23 16.36	0.42	2	70.788				11721
13127	-33	9161	7.5	K0	31 23.626	0.13	4	69.748	-34 07 53.89	0.18	4	69.748				11722
13128	+4	2764	4.93	A2p	13 31 35.825	0.03	66	71.546	+3 54 53.86	0.04	63	71.531	1351	18335	3093	31351
13129	-10	3705	7.9	F2	31 38.903	0.42	2	70.900	-11 16 52.05	0.14	2	70.900		18336		11723
13130	-38	8636	8.4	K5	31 40.117	0.15	3	70.173	-38 31 02.95	0.10	3	70.173				11724
13131	-16	3697	9.0	F5	31 44.237	0.05	2	70.984	-17 05 42.94	0.11	2	70.984				11725
13132	-3	3497	8.3	K0	31 48.250	0.02	2	71.466	-4 06 38.95	0.04	2	71.466				11726
13133	-49	8035	8.4	M0	13 31 49.524	0.12	4	68.808	-50 07 44.67	0.07	4	68.808				1614
13134	-32	9459	6.48	K2	31 52.612	0.09	6	70.730	-33 03 18.31	0.17	6	70.730	3082	18343		33082
13135	-15	3695	8.9	K0	31 58.518	0.27	2	71.896	-16 04 01.94	0.31	2	71.896				11727
13136*	-12	3843	5.81	A0	32 00.622	0.41	2	71.740	-12 57 31.26	0.61	2	71.740		18348		11728
13137	+0	3076	3.44	A2	32 08.145	0.02	82	71.037	-0 20 26.30	0.03	82	71.002	501	18351	3094	80501
13138	-36	8686	8.0	K0	13 32 11.064	0.09	4	70.233	-37 18 00.50	0.11	4	70.233				11729
13139	-9	3719	8.8	K0	32 11.989	0.16	2	72.211	-10 21 00.99	0.07	2	72.211				11730
13140	-24	10984	8.4	F8	32 18.868	0.08	4	69.684	-25 02 55.21	0.14	4	69.684				11731
13141	-85	384	5.65	A2	32 23.507	0.02	257	71.026	-85 31 54.48	0.02	251	71.010	1665	18357	3097	61665
13141	SP				32 23.489	0.02	257	70.926	-85 31 54.34	0.03	251	70.921	1665	18357	3097	71665
13142	-41	7959	9.0	K5	13 32 24.018	0.19	4	70.012	-41 33 24.05	0.14	4	70.012				1615
13143	-30	10699	8.9	F5	32 25.980	0.15	4	70.078	-31 09 11.32	0.18	4	70.078				11732
13144	-6	3843	8.0	K2	32 27.275	0.22	2	70.877	-6 42 44.32	0.10	2	70.877				11733
13145	-64	2481	8.0	K0	32 30.472	0.08	4	68.808	-64 39 13.73	0.21	4	68.808				19608
13146	-1	2838	8.5	F2	32 38.505	0.08	2	72.237	-2 19 04.20	0.10	2	72.237				11734
13147	-21	3736	7.8	M0	13 32 40.327	0.07	4	70.313	-22 21 48.86	0.06	4	70.313				11735
13148	-48	8320	8.5	K5	32 42.257	0.16	4	70.278	-48 56 19.42	0.11	4	70.278				1616
13149	-32	9468	8.6	K5	32 47.353	0.19	4	70.506	-32 32 43.04	0.13	4	70.506				11736
13150	-4	3514	8.3	F8	32 48.557	0.01	2	72.240	-4 40 43.83	0.18	2	72.240		18364		11737
13151	-16	3704	8.4	F8	32 49.177	0.18	2	72.248	-16 40 07.06	0.17	2	72.248				11738
13152	-54	5662	7.7	K5	13 32 53.828	0.15	4	69.816	-54 41 02.80	0.15	4	69.816				11739
13153	-4	3515	5.75	K0	32 55.034	0.05	18	72.063	-5 08 29.92	0.08	18	72.063	1352	18366	3099	31352
13154	-54	5663	8.0	K2	33 00.380	0.04	4	69.307	-55 00 09.01	0.22	4	69.307				11740
13155	-14	3750	8.7	K5	33 02.215	0.17	3	72.292	-14 43 42.72	0.04	2	72.369				11741
13156	-26	9818	8.5	K0	33 06.440	0.14	5	70.738	-26 43 08.39	0.06	4	70.612				11742

13109 A 8935, 9.5m-9.8m, 0°9, 31°

13136 A 8954AB, 6.3m-6.8m, 0°3, 49°.

CATALOG OF 23,001 STARS FOR 1950.0

417

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
13157	-61	3830	7.74	*	13 33 08.642	0.13	4	69.796	-62 05' 24.22	0.07	4	69.796	18372			11743
13158	-83	533	7.39	F2	33 10.472	0.07	5	70.596	-83 39 15.66	0.22	4	70.629	18373			19609
13158	SP				33 10.556	0.07	4	69.984	-83 39 15.47	0.46	4	69.984	18373			19609
13159	-9	3725	8.1	F2	33 15.818	0.20	3	71.921	-9 31 48.29	0.23	3	71.921	18374			11744
13160	-32	9477	9.0	K5	33 16.874	0.11	4	70.582	-33 13 26.62	0.10	4	70.582				11745
13161	-36	8701	8.7	K5	13 33 18.553	0.05	4	70.533	-36 25 27.06	0.13	4	70.533				11746
13162	-57	6156	7.82	F8	33 21.607	0.08	4	69.845	-58 14 36.09	0.20	4	69.845	18375			11747
13163	-81	634	9.4	F8	33 21.888	0.08	5	70.739	-81 39 14.66	0.31	4	70.612				19610
13163	SP				33 21.926	0.03	5	70.504	-81 39 14.14	0.48	4	70.460				19610
13164	+3	2795	8.4	A0	33 22.495	0.15	2	72.290	+2 56 12.07	0.26	2	72.290				11748
13165	+0	3079	8.8	K5	13 33 25.523	0.05	2	72.356	-0 19 21.02	0.37	2	72.356				11749
13166	-57	6158	8.0	K2	33 32.809	0.07	4	70.334	-57 32 07.92	0.10	4	70.334				11750
13167	-52	6611	8.6	K2	33 40.370	0.09	4	70.410	-52 23 05.11	0.21	4	70.410				11751
13168	-2	3711	8.7	F0	33 43.578	0.07	2	71.466	-2 41 02.44	0.23	2	71.466				11752
13169	-12	3850	8.8	K2	33 48.427	0.37	2	72.294	-12 54 07.42	0.21	2	72.294				11753
13170	-51	7624	8.9	K2	13 34 02.663	0.15	4	70.317	-51 47 57.28	0.15	4	70.317				1617
13171	-68	1959	8.9	G5	34 05.271	0.26	5	70.946	-68 43 09.51	0.13	5	70.946	3084	18391		19611
13172	-43	8418	5.96	K0	34 06.211	0.14	6	69.856	-43 53 18.75	0.09	6	69.856				33084
13173	-20	3852	8.6	M1	34 07.223	0.07	4	70.757	-21 26 53.30	0.15	4	70.757				11754
13174*	-39	8354	8.6	G5	34 08.672	0.15	4	70.482	-39 28 59.03	0.18	4	70.482				11755
13175	-0	2713	8.6	K2	13 34 09.662	0.28	2	71.840	-1 00 21.62	0.02	2	71.840				11756
13176	-42	8580	7.30	K5	34 09.910	0.09	4	70.310	-42 31 36.11	0.14	4	70.310		18392		1618
13177	+2	2696	8.8	K5	34 15.594	0.13	2	71.919	+2 08 22.61	0.05	2	71.919				11757
13178	+4	2768	9.1	G5	34 19.132	0.22	2	72.809	+4 17 31.86	0.62	2	72.809				11758
13179	-82	574	8.4	K0	34 19.509	0.10	5	71.042	-82 29 33.69	0.30	4	70.992				19612
13179	SP				13 34 19.235	0.42	4	71.064	-82 29 33.61	0.22	4	71.064				19612
13180*	-15	3705	7.7	F2	34 21.485	0.02	2	72.807	-16 11 33.56	0.27	2	72.807		18394		11759
13181	-65	2399	8.6	A3	34 23.404	0.14	4	70.661	-65 58 34.46	0.09	4	70.661				19613
13182	-28	10167	7.5	K0	34 27.223	0.07	5	71.306	-28 26 17.02	0.28	5	71.306				11760
13183	+25	2652	9.0	M0	34 37.873	0.12	6	71.294	+24 52 03.41	0.13	7	71.041	3085	18399		33085
13184	-5	3735	8.7	K2	13 34 38.744	0.10	2	72.333	-5 38 09.79	0.06	2	72.333				11761
13185	+5	2774	8.5	F0	34 44.288	0.15	2	72.807	+4 40 17.90	0.04	2	72.807				11762
13186	-45	8581	8.9	K5	34 46.291	0.27	4	70.791	-45 37 42.61	0.07	4	70.791				1619
13187	-75	882	6.44	A0	34 51.711	0.07	25	70.668	-75 25 47.47	0.05	24	70.644	503	18406	3103	30503
13187	SP				34 51.721	0.10	12	70.432	-75 25 47.62	0.18	12	70.432	503	18406	3103	50503
13188	-69	1898	5.97	K2	13 34 55.703	0.10	6	70.553	-70 11 26.23	0.07	6	70.553	3086	18410	3104	33086
13189	-34	9019	9.1	K0	34 56.091	0.09	4	70.860	-35 11 42.96	0.15	3	71.345				11763
13190	+0	3082	8.4	A5	34 56.523	0.20	2	72.855	+0 01 57.18	0.35	2	72.855				11764
13191	-5	3737	8.2	F0	35 01.593	0.17	2	73.275	-6 23 53.47	0.20	2	73.275		18415		11765
13192	-67	2322	8.9	K0	35 02.134	0.10	4	69.848	-67 36 42.69	0.12	4	69.848				19614
13193	-19	3709	8.8	K2	13 35 05.664	0.10	5	70.737	-19 54 35.82	0.11	4	70.387				11766
13194	+3	2799	6.93	K0	35 11.442	0.07	2	73.264	+2 38 11.26	0.25	2	73.264		18419	3106	11767
13195	-22	3635	8.0	K2	35 11.650	0.15	4	69.816	-22 57 59.42	0.04	4	69.816				11768
13196	-2	3714	6.74	K0	35 11.699	0.18	2	73.269	-2 58 54.24	0.17	2	73.269		18420		11769
13197	-61	3860	7.9	K2	35 15.809	0.09	4	70.591	-61 29 09.48	0.12	4	70.591				11770
13198	-49	8076	8.0	K2	13 35 18.181	0.12	4	70.966	-49 48 05.44	0.09	4	70.966				1620
13199	-31	10520	8.6	K0	35 19.964	0.12	5	71.222	-31 59 03.98	0.10	4	70.988				11771
13200	-13	3737	8.1	K5	35 20.638	0.05	2	73.275	-14 20 18.27	0.24	2	73.275				11772
13201	-18	3647	8.4	A2	35 26.418	0.11	2	73.268	-18 56 04.83	0.11	2	73.268				11773
13202	-71	1495	8.0	A2	35 31.684	0.12	4	70.382	-72 15 01.77	0.13	4	70.382				19615
13203	-37	8784	9.0	G5	13 35 33.147	0.13	4	71.222	-38 03 59.07	0.14	4	71.222				11774
13204	-8	3602	8.7	K2	35 41.720	0.18	2	72.748	-8 50 15.87	0.09	2	72.748				11775
13205	-46	8770	8.0	K2	35 42.089	0.13	4	70.660	-46 43 09.11	0.05	4	70.660				1621
13206	+1	2834	8.1	A5	35 58.196	0.24	2	72.669	+1 30 30.86	0.42	2	72.669		18444		11776
13207	-48	8374	9.0	K5	36 05.011	0.19	4	71.016	-48 32 55.88	0.25	4	71.016				1622
13208	-40	8047	8.5	K5	13 36 13.301	0.14	5	71.075	-41 00 16.13	0.15	4	70.809				1623
13209	-24	11011	7.63	K0	36 15.165	0.18	4	70.104	-24 36 31.98	0.03	4	70.104		18449		11777
13210	-52	6648	8.3	K2	36 15.547	0.04	4	70.096	-53 05 30.92	0.15	5	70.353				11778
13211	-1	2847	8.5	K5	36 19.503	0.14	2	72.654	-2 16 38.80	0.43	2	72.654				11779
13212	-30	10781	8.4	K0	36 33.963	0.09	4	70.308	-30 37 56.21	0.10	4	70.308				11780
13213	-11	3562	7.82	G5	13 36 38.168	0.02	2	72.321	-11 50 18.35	0.30	2	72.321		18455		11781
13214	-14	3767	7.52	G5	36 38.841	0.31	2	71.474	-14 57 18.56	0.06	2	71.474		18456		11782
13215	-52	6655	2.56	B1	36 42.226	0.03	91	71.265	-53 12 46.90	0.03	89	71.245	504	18458	3113	30504
13216	-44	8793	9.4	K0	36 42.388	0.13	5	70.827	-45 17 28.08	0.12	4	70.918				1624
13217	-37	8802	7.9	K2	36 49.791	0.15	4	70.541	-37 30 48.75	0.15	4	70.541				11783
13218	-50	7947	8.0	K2	13 36 52.560	0.08	4	69.822	-50 55 16.92	0.17	4	69.822				1625
13219	-9	3737	8.3	K0	36 55.875	0.09	2	72.334	-9 51 38.46	0.03	2	72.334				11784
13220	-69	1904	8.9	A2	37 00.841	0.08	4	70.150	-69 44 16.76	0.18	4	70.150				19616
13221	-63	2899	8.4	G0	37 06.880	0.17	4	70.034	-63 48 59.01	0.08	4	70.034				11785
13222	-15	3715	6.86	K2	37 16.602	0.01	2	72.245	-16 11 36.73	0.42	2	72.245		18468	3115	11786
13223	-26	9856	7.05	K0	13 37 20.578	0.08	3	70.235	-27 19 29.06	0.08	3	70.235		18470		11787
13224	-21	3750	8.7	K0	37 24.440	0.03	4	70.398	-22 23 05.34	0.09	4	70.398				11788
13225	-56	5870	8.5	G5	37 33.194	0.13	4	69.744	-57 01 12.59	0.09	4	69.744				11789
13226	-7	3670	8.9	F0	37 39.520	0.18	2	70.906	-7 45 59.72	0.07	2	70.906				11790
13227	-61	3897	7.3	K2	37 39.552	0.13	5	71.061	-62 14 48.01	0.19	5	71.061				11791

13157 G0+A3.

13174 SDS, 9.3m-9.5m, 1^h5, 337°.13180 8.0m-11.0m, 1^h0, 306°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
13228	-74	1083	7.9	K2	13 37 45.588	0.19	4	69.883	-74 31' 25.32	0.25	4	69.883				19617
13229	-4	3533	8.0	F5	37 48.974	0.32	2	71.939	-4 59 34.03	0.00	2	71.939				11792
13230	-39	8401	7.7	K5	38 00.089	0.14	4	69.782	-39 27 53.45	0.07	3	69.908				11793
13231	-67	2340	8.8	M1	38 00.245	0.05	4	70.373	-67 50 23.25	0.20	4	70.373				19618
13232	-15	3718	8.9	K2	38 05.764	0.22	2	71.456	-15 39 41.83	0.06	2	71.456				11794
13233	-47	8511	8.0	M0	13 38 06.648	0.09	4	69.831	-48 03 57.44	0.19	4	69.831				1626
13234	-29	10516	7.98	G5	38 11.958	0.05	4	70.607	-29 28 41.83	0.14	4	70.607	18483			11795
13235	-41	8048	8.75	K0	38 12.551	0.08	3	70.252	-42 14 59.65	0.18	3	70.252	18484			1627
13236	-33	9245	9.0	K5	38 17.151	0.09	4	70.233	-33 24 10.02	0.07	4	70.233				11796
13237	-12	3869	7.26	K0	38 19.615	0.15	2	72.286	-12 31 49.24	0.06	2	72.286	18489			11797
13238	-29	10519	8.0	K0	13 38 25.153	0.18	4	71.121	-29 39 31.66	0.13	4	71.121				11798
13239	-25	9945	7.38	K2	38 39.428	0.09	4	71.140	-26 16 44.34	0.13	4	71.140	18498			11799
13240	-69	1910	8.3	K0	38 39.933	0.06	5	70.916	-70 09 52.90	0.16	5	70.916				19619
13241	-58	5059	5.53	B9	38 40.883	0.13	6	71.331	-58 32 05.42	0.06	6	71.331	18500			21056
13242	-26	9872	8.7	A2	38 42.961	0.03	4	70.176	-27 01 12.57	0.11	4	70.176				11800
13243	-22	3645	6.42	A0	13 38 44.918	0.02	107	71.106	-23 11 51.30	0.03	103	71.053	1354	18502	3117	81354
13244	-53	5729	9.1	G0	38 48.615	0.05	3	69.628	-54 19 47.39	0.08	3	69.628				11801
13245	-43	8468	9.6	G5	38 49.981	0.07	4	69.777	-43 31 47.93	0.12	4	69.777				1628
13246	-16	3723	8.6	K5	38 57.554	0.11	2	71.946	-17 04 21.74	0.17	2	71.946				11802
13247	-34	9078	8.7	K0	38 58.300	0.15	4	69.801	-34 31 38.45	0.13	4	69.801				11803
13248	-7	3674	5.16	M0	13 38 58.920	0.04	26	71.589	-8 27 04.31	0.07	26	71.589	1355	18509	3119	31355
13249	-58	5066	8.4	K0	39 02.819	0.05	4	70.886	-58 43 10.01	0.20	4	70.886				11804
13250	-18	3662	7.7	F0	39 09.430	0.03	2	72.242	-18 43 57.71	0.17	2	72.242			3120	11805
13251	-57	6214	7.8	K2	39 14.251	0.15	4	70.645	-57 36 02.22	0.23	4	70.645				11806
13252	-6	3870	8.5	K0	39 25.028	0.29	2	71.256	-6 43 01.62	0.13	2	71.256				11807
13253	+4	2774	9.4	F8	13 39 25.900	0.28	2	72.398	+4 13 51.75	0.48	2	72.398				11808
13254	-36	8786	8.7	K2	39 31.559	0.02	4	70.470	-37 07 28.19	0.14	4	70.470				11809
13255	-21	3755	8.6	G5	39 35.421	0.12	4	70.266	-21 47 37.92	0.12	4	70.266				11810
13256	+2	2710	8.2	K0	39 36.036	0.12	2	71.785	+2 26 27.58	0.40	2	71.785				11811
13257	-23	11217	8.8	F0	39 38.275	0.07	4	70.393	-24 07 26.92	0.10	4	70.393				11812
13258	-56	5891	6.30	B2	13 39 38.942	0.03	51	70.823	-56 30 58.47	0.04	50	70.797	1356	18517	3121	31356
13259	-35	8925	9.0	K0	39 41.599	0.15	4	70.281	-35 46 56.96	0.06	4	70.281				11813
13260	-12	3873	8.8	K2	39 47.352	0.12	2	71.945	-13 18 30.49	0.53	2	71.945				11814
13261	+1	2839	7.9	M0	39 48.186	0.01	2	70.850	+1 14 55.26	0.28	2	70.850	18523			11815
13262	-32	9566	8.22	K0	39 57.973	0.05	4	70.264	-32 25 06.51	0.06	4	70.264	18528			11816
13263	-79	742	7.8	K5	13 40 03.432	0.10	4	69.201	-79 31 01.61	0.11	4	69.201				19620
13263	SP				40 03.520	0.09	4	69.734	-79 31 01.57	0.23	4	69.734				19620
13264	-59	5142	8.7	K0	40 14.257	0.06	4	69.741	-60 11 01.85	0.10	4	69.741				11817
13265	-10	3738	8.1	A0	40 18.355	0.27	2	71.452	-11 03 02.41	0.19	2	71.452	18537			11818
13266	-1	2851	8.0	K0	40 19.467	0.04	2	71.462	-2 13 01.05	0.53	2	71.462				11819
13267	-0	2727	8.1	K0	13 40 23.501	0.02	2	70.962	-0 57 24.15	0.31	2	70.962			3125	11820
13268	-42	8674	8.0	K0	40 27.434	0.16	4	69.742	-42 25 50.64	0.01	3	69.856				1629
13269	-25	9958	8.6	K0	40 28.368	0.16	5	71.123	-25 37 04.81	0.12	5	71.123				11821
13270	+4	2775	5.62	K0	40 32.344	0.18	2	71.318	+3 47 23.07	0.02	2	71.318	18540			11822
13271	-60	4913	8.3	K0	40 34.537	0.08	5	70.475	-61 06 55.53	0.07	5	70.475				11823
13272	-30	10842	8.8	K2	13 40 38.498	0.10	3	70.249	-31 14 01.20	0.18	3	70.249				11824
13273	-51	7692	7.61	K2	40 42.388	0.12	4	69.726	-51 50 54.03	0.17	4	69.726	18547			1630
13274	-38	8759	8.5	K0	40 44.920	0.15	4	69.770	-38 29 33.57	0.17	4	69.770				11825
13275	-49	8149	8.5	G5	40 55.967	0.07	4	70.272	-49 23 23.56	0.13	4	70.272				1631
13276	-20	3870	9.0	F8	41 00.028	0.14	6	71.604	-20 57 42.32	0.19	5	71.677				11826
13277	-34	9102	8.1	B9	13 41 06.719	0.03	4	69.738	-35 03 59.61	0.14	4	69.738				18453
13278	-28	10228	8.0	K0	41 07.127	0.08	4	70.168	-28 24 53.65	0.11	4	70.168				11827
13279	-70	1664	7.17	K0	41 08.770	0.19	4	68.816	-71 16 55.43	0.14	4	68.816	18558			19621
13280	-4	3540	6.47	A0	41 17.852	0.04	2	69.859	-5 14 52.47	0.02	2	69.859	18562	3128		11828
13281	-7	3685	8.7	K0	41 34.895	0.20	3	71.347	-8 14 14.67	0.23	3	71.347				11829
13282	-52	6715	8.3	K2	13 41 36.105	0.10	4	68.838	-52 47 27.67	0.10	4	68.838				11830
13283	-20	3873	8.9	K0	41 42.005	0.09	3	69.279	-20 58 21.04	0.27	3	69.279				11831
13284	-15	3731	5.71	G0	41 47.665	0.02	113	71.322	-15 55 42.06	0.03	111	71.307	1357	18568	3130	31357
13285	-17	3918	8.2	B0	41 48.213	0.30	2	71.445	-17 41 11.67	0.03	2	71.445				11832
13286	+1	2840	8.1	K2	41 53.765	0.01	2	71.747	+0 57 08.90	0.13	2	71.747				11833
13287	-24	11057	6.25	K0	13 41 58.210	0.15	4	69.935	-25 15 00.53	0.18	4	69.935	18571			11834
13288	-73	1188	9.3	G5	41 59.943	0.14	4	69.275	-73 39 42.55	0.13	4	69.275				19622
13289	-16	3737	8.6	K0	42 01.027	-	1	72.108	-17 27 47.44	-	1	72.108				11835
13290	-27	9395	8.5	G0	42 02.558	0.10	4	69.702	-27 23 48.02	0.15	4	69.702				11836
13291	-5	3756	8.7	G5	42 09.416	0.11	3	72.048	-5 54 44.87	0.24	3	72.048				11837
13292	-2	3726	8.7	K5	13 42 09.634	0.26	2	69.984	-3 16 58.28	0.15	2	69.984				11838
13293	-6	3878	7.11	K0	42 19.342	0.09	2	71.818	-7 23 02.64	0.25	2	71.818	18579			11839
13294	-5	3758	7.5	K0	42 20.294	0.27	2	71.428	-5 45 07.37	0.04	2	71.428				11840
13295	-48	8457	9.0	K0	42 22.239	0.13	4	70.498	-48 48 25.61	0.08	4	70.498				1632
13296	-40	8130	8.09	K5	42 23.580	0.06	5	70.956	-41 03 10.06	0.17	5	70.956	18581			1633
13297	-43	8521	8.5	K2	13 42 24.430	0.10	4	70.624	-44 09 16.90	0.13	4	70.624				1634
13298	-14	3792	8.1	M0	42 27.338	0.03	2	71.441	-14 30 59.84	0.02	2	71.441				11841
13299	+2	2718	8.6	K0	42 31.236	0.17	2	71.448	+1 46 36.55	0.56	2	71.448				11842
13300	-2	3727	8.3	A5	42 35.089	0.08	2	72.680	-3 03 53.14	0.14	2	72.680	18586			11843
13301	-18	3677	8.3	K0	42 39.410	0.06	3	72.217	-19 04 54.83	0.24	3	72.217				11844

13270 A 9000, 8.1m, 3°0, 22°.

CATALOG OF 23,001 STARS FOR 1950.0

419

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
13302	-9	3768	8.5	G0	13 42 43.481	0.01	2	72.721	-10 16 49.49	0.14	2	72.721				11845
13303	-65	2454	8.8	K0	42 48.841	0.14	4	69.736	-65 35 49.83	0.22	4	69.736				19623
13304	-32	9603	4.36	F5	42 49.515	0.03	63	71.226	-32 47 32.96	0.04	61	71.223	506	18593	3132	30506
13305	-38	8784	9.1	K0	42 50.772	0.29	4	70.652	-39 14 46.09	0.21	4	70.652				11846
13306	-35	8978	9.3	F5	42 54.002	0.11	4	71.494	-35 35 51.09	0.15	3	71.272				11847
13307	-64	2552	7.7	M1	13 42 55.805	0.17	4	69.681	-64 25 32.48	0.09	4	69.681				19624
13308	-11	3587	8.1	K2	42 57.059	0.01	2	71.753	-12 08 03.27	0.00	2	71.753		18596		11848
13309	-50	8015	8.2	M1	42 59.244	0.14	4	69.209	-50 37 47.63	0.18	4	69.209				1635
13310	-42	8714	8.5	K0	43 04.715	0.11	3	70.526	-43 21 17.41	0.20	3	70.526				1636
13311	-34	9124	9.2	K0	43 05.806	0.18	5	71.215	-34 54 09.31	0.25	4	70.980				11849
13312	-32	9609	8.8	K	13 43 09.722	0.15	5	70.901	-33 13 03.21	0.12	4	71.275				11850
13313	-46	8845	8.0	M0	43 12.192	0.13	4	70.542	-46 54 22.09	0.09	4	70.542				1637
13314	-29	10579	8.2	G0	43 26.520	0.11	4	70.500	-30 13 28.48	0.16	4	70.500				11851
13315	-13	3765	8.7	G5	43 32.345	0.09	2	69.899	-13 46 43.04	0.11	2	69.899				11852
13316	-32	9616	8.8	K0	43 38.148	0.08	4	70.680	-32 29 11.27	0.22	4	70.680				11853
13317	-41	8138	8.0	K0	13 43 38.808	0.13	4	70.579	-42 00 43.10	0.30	4	70.579				1638
13318	-4	3555	8.0	K5	43 42.867	0.00	2	71.694	-4 37 35.87	0.32	2	71.694				11854
13319	-52	6740	7.37	K2	43 50.136	0.10	4	69.287	-50 01 59.38	0.13	4	69.287		18613		11855
13320	-35	8992	8.0	K2	43 50.467	0.09	4	70.643	-36 09 18.90	0.11	4	70.643				11856
13321	-75	898	9.1	K0	43 52.918	0.15	4	69.192	-75 32 45.57	0.08	4	69.192				19625
13321 SP					13 43 52.884	0.24	4	68.799	-75 32 45.64	0.26	4	68.799				19625
13322	+1	2847	8.8	K0	43 54.159	0.01	2	71.437	+0 41 44.64	0.02	2	71.437				11857
13323	-37	8890	9.3	K1	43 59.667	0.14	4	70.850	-37 36 15.15	0.28	4	70.850				11858
13324	-20	3885	8.3	F8	44 00.903	0.20	4	70.514	-20 36 14.65	0.15	4	70.514				11859
13325	-35	8995	5.24	A0	44 00.947	0.13	7	70.765	-36 00 08.67	0.07	5	70.574	3091	18618	3135	33091
13326	-21	3770	8.8	G5	13 44 07.576	0.13	4	70.112	-21 41 04.51	0.07	4	70.112				11860
13327	-49	8194	6.06	A3	44 18.045	0.09	6	69.847	-50 00 00.50	0.08	6	69.847	3092	18622		33092
13328	-67	2374	7.6	K2	44 23.401	0.14	4	69.260	-67 53 49.19	0.13	4	69.260				19626
13329	+26	2494	5.91	F5	44 23.954	0.06	17	71.623	+25 57 07.31	0.12	17	71.623	1358	18623	3136	31358
13330	-22	3660	8.2	K0	44 25.908	0.04	4	69.779	-23 13 33.59	0.04	4	69.779				11861
13331	-45	8700	8.5	M1	13 44 26.133	0.09	4	70.236	-45 54 42.54	0.21	4	70.236				1639
13332	-18	3681	6.56	A2	44 29.206	0.12	6	70.748	-19 00 22.86	0.12	6	70.748	3093	18626		33093
13333	-19	3740	8.0	F8	44 32.156	0.06	5	70.701	-20 02 15.71	0.25	4	70.567				11862
13334*	-8	3639	6.24	K0	44 34.596	0.12	2	69.862	-9 27 35.74	0.29	2	69.862		18630		11863
13335	-1	2858	7.7	B5	44 44.223	0.02	2	69.930	-2 11 39.95	0.03	2	69.930		18634	3137	11864
13336	+18	2782	4.51	F5	13 44 52.401	0.02	94	70.916	+17 42 19.95	0.04	94	70.916	507	18637	3139	80507
13337	-47	8621	8.5	K5	44 53.404	0.12	4	69.799	-47 55 22.63	0.18	4	69.799				1640
13338	-15	3739	7.90	K2	45 16.146	0.01	2	70.746	-15 48 58.36	0.01	2	70.746				11865
13339	-37	8906	7.6	K2	45 17.738	0.05	4	69.780	-38 00 49.21	0.11	4	69.780			3140	11866
13340	+0	3102	10.3v	A0	45 18.571	0.16	4	69.792	-0 20 44.71	0.41	4	69.792				26935
13341	-56	5944	8.4	K0	13 45 20.553	0.10	4	69.665	-57 02 51.28	0.14	4	69.665				11867
13342	+4	2783	8.3	G5	45 23.277	0.20	3	71.020	+4 05 43.68	0.19	3	71.020				11868
13343	-55	5742	9.1	G5	45 29.368	0.15	4	69.793	-56 02 25.25	0.14	4	69.793				11869
13344	-0	2738	9.0	F8	45 31.573	0.03	2	71.425	-1 19 47.10	0.48	2	71.425				11870
13345	-39	8482	8.51	K0	45 35.808	0.12	5	70.269	-39 49 53.22	0.15	4	70.220		18644		11871
13346	-21	3775	8.9	G5	13 45 45.386	0.13	4	69.905	-21 54 25.95	0.15	4	69.905				11872
13347	-3	3535	8.0	G0	45 49.872	0.18	3	71.239	-4 27 36.35	0.37	2	71.236				11873
13348	-59	5208	7.7	K0	45 59.973	0.04	4	69.876	-59 40 27.60	0.22	4	69.876				11874
13349	-42	8761	9.0	K0	46 00.595	0.21	3	70.233	-42 45 33.54	0.19	3	70.233				1641
13350	+2	2727	8.6	K0	46 01.603	0.06	2	70.389	+1 52 55.58	0.08	2	70.389				11875
13351	-2	3738	8.9	K0	13 46 04.257	0.21	2	72.308	-3 18 22.11	0.15	2	72.308				11876
13352	-43	8561	9.0	G5	46 05.525	0.16	4	70.607	-43 54 02.70	0.07	4	70.607				1642
13353	-16	3747	8.9	K0	46 07.910	0.05	2	72.383	-16 43 54.40	0.01	2	72.383				11877
13354	-27	9429	7.1v	M8e	46 12.083	0.09	4	70.080	-28 07 07.91	0.08	4	70.080		18659		11878
13355	-77	912	8.2	K5	46 15.351	0.15	4	69.687	-77 37 03.89	0.12	4	69.687				19627
13355 SP					13 46 15.419	0.17	4	69.502	-77 37 03.58	0.53	4	69.502				19627
13356	-26	9941	8.5	K0	46 19.717	0.17	4	70.538	-27 00 23.58	0.18	4	70.538				11879
13357	-0	2743	8.5	K0	46 23.898	0.03	2	72.350	-1 20 39.82	0.01	2	72.350				11880
13358	-41	8171	3.53	B2	46 29.682	0.11	6	70.995	-41 26 22.06	0.17	6	70.995		18665	3143	21057
13359	-66	2338	8.5	F0	46 33.643	0.04	5	70.387	-66 34 29.96	0.08	5	70.387				19628
13360	-41	8172	3.32	B2p	13 46 35.593	0.03	68	71.327	-42 13 32.07	0.04	64	71.333	508	18667	3144	30508
13361	-6	3889	8.7	K5	46 35.769	0.07	2	71.828	-7 03 53.85	0.41	2	71.828				11881
13362	-14	3808	8.9	G5	46 38.468	0.01	2	71.725	-14 30 49.44	0.56	2	71.725				11882
13363	-25	10015	8.0	G0	46 38.547	0.14	4	69.937	-26 06 04.57	0.12	4	69.937				11883
13364	-30	10919	8.9	K2	46 42.648	0.15	4	70.298	-31 14 44.04	0.13	4	70.298				11884
13365	+5	2801	8.1	F0	13 46 47.781	0.40	2	72.242	+4 47 41.74	0.06	2	72.242				11885
13366	-19	3752	8.5	K0	46 53.561	0.07	2	70.888	-19 46 36.18	0.10	2	70.888				11886
13367	-49	8225	8.4	G5	46 54.260	0.08	4	70.275	-49 53 56.70	0.12	4	70.275				1643
13368	-8	3644	8.8	K5	46 58.237	0.08	2	71.415	-8 57 03.69	0.01	2	71.415				11887
13369	-24	11105	8.3	M1	47 00.421	0.14	4	70.074	-25 06 18.78	0.12	4	70.074				11888
13370	-11	3604	8.0	M0	13 47 04.448	0.00	2	71.443	-12 18 13.07	0.44	2	71.443				11889
13371	-17	3937	5.11	K0	47 08.811	0.02	86	70.987	-17 53 09.99	0.03	82	70.942	510	18676	3146	80510
13372	-50	8065	8.9	K0	47 10.732	0.09	4	69.746	-50 31 24.01	0.09	4	69.746				1644
13373	-58	5208	8.4	K2	47 11.079	0.05	4	68.905	-58 48 06.65	0.12	4	68.905				11890
13374	-47	8649	8.05	G5	47 12.094	0.14	4	70.587	-48 01 34.33	0.16	4	70.587		18679		1645

13334 6.6m-7.6m, 0°4, 243°.
13340 10.3m to 11.1m.

13354 7.1m to 9.9m.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
13375	+	9 2814	6.54	A0	13 47 15.006	0.03	29	72.131	+ 8 39 22.57	0.06	29	72.131	1359	18680	3147	31359
13376	-	28 10277	6.10	B9	47 15.981	0.08	6	69.807	-28 50 00.24	0.10	6	69.807	3097	18681	3148	33097
13377	-	28 10279	8.2	K5	47 18.393	0.05	4	70.749	-29 14 18.46	0.20	4	70.749				11891
13378	+	21 2578	5.06	K0	47 20.942	0.06	7	70.870	+21 30 42.00	0.08	7	70.870	3098	18683		33098
13379	-	34 9177	9.2	K2	47 24.766	0.10	5	71.280	-35 06 44.00	0.14	5	71.280				11892
13380	-	20 3898	7.08	K2	13 47 29.391	0.11	4	70.333	-20 37 18.27	0.10	4	70.333		18690		11893
13381	-	86 306	8.66	K0	47 29.559	0.15	4	69.184	-87 22 15.86	0.30	4	69.184		18688		19629
13381	SP				47 29.127	0.04	4	69.022	-87 22 15.70	0.46	4	69.022		18688		19629
13382	-	74 1107	8.6	A0	47 30.527	0.16	5	70.033	-75 12 21.49	0.08	5	70.033				19630
13382	SP				47 30.510	0.12	4	69.948	-75 12 21.32	0.57	4	69.948				19630
13383	-	44 8925	9.0	K2	13 47 42.184	0.19	3	70.589	-44 47 32.59	0.12	3	70.589				1646
13384	-	52 6777	8.7	K2	47 47.166	0.21	4	69.181	-52 58 52.71	0.08	4	69.181				11894
13385	-	68 2014	5.74	K2	47 52.181	0.04	7	70.264	-69 09 14.95	0.13	6	70.098	3099	18696	3150	33099
13386	+	6 2800	6.25	K0	47 53.901	0.09	6	69.561	+ 5 44 40.55	0.05	6	69.561	3100	18698		33100
13387	+	3 2819	8.7	K5	47 53.983	0.00	3	71.706	+ 2 45 37.08	0.41	2	71.937				11895
13388	-	79 744	7.7	F0	13 47 58.307	0.15	4	70.303	-80 01 33.94	0.08	4	70.303				19631
13388	SP				47 58.480	0.14	4	70.560	-80 01 35.06	0.31	4	70.560				19631
13389	-	10 3768	8.1	M0	48 09.175	0.27	3	71.063	-11 06 41.25	0.02	2	70.903				11896
13390	-	33 9372	8.6	K0	48 12.077	0.09	4	70.531	-33 32 14.48	0.15	4	70.531				11897
13391	-	29 10630	8.2	M0	48 17.086	0.12	4	70.140	-30 19 07.96	0.11	4	70.140				11898
13392	-	78 829	7.7	K2	13 48 20.005	0.08	4	69.727	-78 22 42.89	0.10	4	69.727				19632
13392	SP				48 19.934	0.30	4	70.041	-78 22 43.01	0.34	4	70.041				19632
13393	-	12 3910	7.02	F0	48 24.770	0.40	2	70.694	-13 25 55.13	0.13	2	70.694		18710		11899
13394	-	37 8952	8.4	K2	48 25.518	0.16	4	70.641	-37 39 54.18	0.11	4	70.641				11900
13395	-	35 9051	9.2	G5	48 31.065	0.07	4	70.852	-35 44 31.30	0.14	4	70.852				11901
13396	-	23 11329	6.48	G0	13 48 33.972	0.10	4	68.930	-24 08 27.52	0.06	4	68.930		18713		11902
13397	-	46 8908	8.5	K0	48 38.051	0.15	4	70.068	-46 52 00.54	0.19	3	70.289				1647
13398	-	46 8909	5.87	B3	48 40.607	0.07	6	71.527	-46 39 06.24	0.15	6	71.527		18715	3153	21058
13399	-	48 8542	8.8	K0	48 43.808	0.08	3	69.581	-48 34 14.60	0.07	3	69.581				1648
13400	-	17 3944	9.0	A0	48 49.608	0.15	2	70.918	-18 06 36.78	0.13	2	70.918				11903
13401	-	45 8763	8.6	K5	13 48 53.437	0.11	5	71.043	-45 56 08.96	0.12	4	70.769				1649
13402	-	40 8213	9.1	G5	48 53.848	0.13	5	71.079	-40 26 33.35	0.23	4	70.810				1650
13403p	-	32 9676	4.72	B5	48 55.910	0.06	7	71.349	-32 44 49.56	0.12	7	71.349		18724		21059
13404	-	55 5760	8.7	F2	48 56.962	0.14	4	68.819	-55 25 32.80	0.15	4	68.819				11904
13405	-	82 585	5.76	K2	49 04.922	0.10	7	68.977	-82 25 13.44	0.13	7	68.977	3986	18731	3155	33986
13405	SP				13 49 04.979	0.09	6	69.310	-82 25 13.08	0.24	6	69.310	3986	18731	3155	53986
13406	-	40 8216	8.5	K5	49 06.801	0.16	4	70.136	-41 12 45.46	0.22	4	70.136				1651
13407	-	51 7795	8.2	K5	49 12.028	0.02	4	68.823	-51 34 34.07	0.08	4	68.823				1652
13408	-	36 8911	7.7	K5	49 31.838	0.21	3	69.547	-36 35 21.02	0.17	3	69.547				11905
13409	-	31 10713	9.1	K5	49 34.862	0.10	4	70.046	-32 11 28.51	0.14	3	70.353				11906
13410	-	63 3026	8.5	K0	13 49 36.891	0.07	4	69.769	-63 37 28.45	0.16	4	69.769				11907
13411	-	7 3716	8.8	G5	49 43.031	0.06	2	69.940	- 7 37 13.26	0.10	2	69.940				11908
13412	-	1 2869	9.0	G0	49 50.278	0.15	2	70.030	- 2 06 32.01	0.03	2	70.030				11909
13413	+	12 2635	5.99	A2	49 51.362	0.15	6	69.123	+12 24 41.21	0.15	6	69.123	3104	18746		33104
13414	+	4 2794	8.5	F5	49 51.413	0.17	2	70.943	+ 4 08 38.17	0.16	2	70.943				11910
13415	-	56 5989	9.0	F8	13 49 54.408	0.06	4	69.858	-56 27 08.47	0.11	4	69.858				11911
13416	-	17 3949	7.02	*	49 54.653	0.12	3	71.698	-18 27 46.19	0.18	2	71.924		18747		11912
13417	-	61 4102	7.94	K2	49 55.006	0.18	4	69.835	-61 22 59.95	0.18	4	69.835		18748		11913
13418	-	4 3580	8.5	F8	49 58.698	0.07	2	71.421	- 4 49 27.51	0.14	2	71.421				11914
13419	+	1 2857	8.0	K0	50 05.058	0.22	2	70.863	+ 1 04 15.79	0.05	2	70.863				11915
13420	-	52 6798	8.7	K0	13 50 05.675	0.14	4	69.704	-52 59 44.12	0.04	4	69.704				11916
13421	-	9 3793	7.7	K0	50 14.290	0.08	2	71.440	-10 26 10.91	0.05	2	71.440				11917
13422	-	5 3774	8.3	F0	50 16.912	0.24	2	71.365	- 6 14 33.70	0.24	2	71.365				11918
13423	-	31 10729	4.76	B5	50 19.377	0.11	6	70.647	-31 40 53.69	0.03	6	70.647		18755	3160	21060
13424	-	52 6805	6.06	B5	50 27.345	0.09	7	71.084	-53 07 38.90	0.12	7	71.084		18757		21061
13425	-	44 8960	9.0	M1	13 50 36.148	0.11	4	69.705	-44 35 08.43	0.34	4	69.705				1653
13426	-	27 9470	8.6	F0	50 52.305	0.10	4	68.828	-27 54 23.14	0.05	4	68.828				11919
13427	-	26 9979	7.6	K2	50 52.575	0.23	4	69.311	-26 27 41.51	0.12	4	69.311				11920
13428	+	29 2464	5.84	A5	50 54.011	0.08	6	69.139	+28 53 37.03	0.16	6	69.139	3106	18769		33106
13429	-	20 3914	8.6	G0	51 04.225	0.09	4	69.407	-20 58 22.49	0.07	4	69.407				11921
13430	-	22 3676	8.0	K0	13 51 15.213	0.14	4	69.651	-23 17 50.62	0.11	4	69.651				11922
13431	-	59 5277	8.1	G5	51 15.683	0.10	4	69.898	-59 23 58.47	0.16	4	69.898				11923
13432*	-	50 8107	8.2	K0	51 16.273	0.14	4	69.787	-51 16 41.53	0.18	4	69.787				1654
13433	-	7 3723	8.1	G5	51 16.704	0.20	2	70.384	- 8 14 18.22	0.20	2	70.384		18779		11924
13434	-	54 5783	7.25	K0	51 16.859	0.18	4	69.819	-54 49 35.14	0.08	4	69.819		18780		11925
13435	-	60 5074	8.5	K0	13 51 18.975	0.09	4	70.423	-61 03 17.73	0.17	4	70.423				11926
13436	-	28 10308	6.78	K0	51 25.120	0.06	4	69.657	-28 29 51.82	0.22	4	69.657		18782		11927
13437	-	10 3778	7.52	K2	51 27.696	0.10	2	70.773	-11 27 00.99	0.17	2	70.773			3161	11928
13438	-	0 2755	8.8	K0	51 32.314	0.16	2	71.437	- 0 42 40.90	0.16	2	71.437				11929
13439	-	5 3776	8.5	K5	51 33.281	0.19	3	71.686	- 5 31 40.29	0.23	2	71.907				11930
13440	-	16 3760	6.81	K0	13 51 37.955	0.36	2	70.755	-16 56 05.37	0.44	2	70.755		18787		11931
13441	-	71 1532	9.0	K5	51 38.150	0.02	4	70.336	-71 57 35.53	0.14	4	70.336				19633
13442	-	21 3799	8.8	K0	51 39.712	0.08	4	69.328	-21 44 36.42	0.09	4	69.328				11932
13443	-	2 3758	8.5	F5	51 45.142	0.05	2	69.750	- 2 45 33.39	0.25	2	69.750				11933
13444	-	37 8998	8.9	G0	51 50.252	0.13	4	70.147	-37 40 57.02	0.10	4	70.147				11934

13403 SDS, 6.17m, 7.2, 106°.

13416 F2+A2.

13432 8.0m-9.6m, 0°3, 310°.

CATALOG OF 23,001 STARS FOR 1950.0

421

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
13445	-51	7832	5.84	B8	13 51 57.724	0.14	7	71.285	-51 54 56.71	0.08	7	71.285		18795		21062
13446	-17	3959	8.8	K2	52 04.319	0.24	2	70.522	-17 29 19.71	0.33	2	70.522				11935
13447	-0	2758	5.30	K0	52 07.786	0.09	6	69.438	-1 15 28.64	0.12	6	69.438	3107	18800		33107
13448	-61	4169	8.09	G5	52 10.041	0.15	4	69.897	-62 06 49.96	0.27	4	69.897		18801		11936
13449	+19	2725	2.80	G0	52 18.065	0.04	39	71.442	+18 38 43.75	0.05	38	71.447	513	18805	3162	30513
13450	-73	1214	8.6	F2	13 52 18.713	0.10	4	70.064	-74 20 21.35	0.26	4	70.064				19634
13451	-46	8949	3.06	B2p	52 24.391	0.02	117	71.236	-47 02 35.87	0.03	116	71.226	512	18809	3163	30512
13452	-8	3661	8.8	K5	52 28.771	0.17	2	71.466	-9 19 43.78	0.15	2	71.466				11937
13453	-83	542	8.6	K0	52 28.924	0.08	4	70.358	-84 14 21.37	0.15	4	70.358				19635
13453	SP				52 28.888	0.12	4	69.753	-84 14 21.12	0.14	4	69.753				19635
13454	-11	3626	8.3	K5	13 52 30.579	0.21	2	71.479	-12 12 14.92	0.52	2	71.479				11938
13455	-42	8857	9.2	K0	52 34.694	0.04	4	69.755	-42 41 31.94	0.14	3	69.872				1655
13456	+3	2829	8.1	K2	52 44.325	0.06	2	70.963	+3 31 11.43	0.18	2	70.963		18815		11939
13457	-32	9719	8.2	K0	52 44.532	0.10	5	69.955	-32 29 32.07	0.11	4	69.829				11940
13458	-3	3549	8.3	K5	52 48.941	0.22	2	71.769	-4 07 39.88	0.09	2	71.769				11941
13459	-0	2764	8.4	K5	13 52 53.485	0.13	2	72.230	-1 12 19.39	0.26	2	72.230				11942
13460	-15	3770	8.2	K2	52 53.950	0.19	2	72.323	-15 53 59.21	0.17	2	72.323				11943
13461	-25	10077	8.3	K0	52 59.983	0.09	4	69.824	-25 22 14.79	0.15	4	69.824				11945
13462	-13	3793	8.6	G5	53 00.032	0.07	2	72.330	-13 29 44.01	0.29	2	72.330				11944
13463	-30	11016	8.6	F5	53 00.501	0.05	4	69.830	-31 21 48.86	0.07	4	69.830				11946
13464	-14	3830	9.2	F5	13 53 06.092	0.07	3	72.520	-14 32 57.86	0.02	2	72.702				11947
13465	-8	3667	6.92	K5	53 08.901	0.04	5	72.114	-9 18 55.66	0.13	4	72.108	3108	18823	3164	11948
13466	-29	10695	8.0	K2	53 10.277	0.09	4	69.416	-29 38 29.18	0.14	4	69.416				11949
13467	+2	2745	8.2	A0	53 15.527	0.14	2	71.818	+1 45 50.46	0.22	2	71.818				11950
13468	-33	9436	8.5	K0	53 16.581	0.09	3	69.557	-33 37 54.07	0.19	3	69.557				11951
13469	-76	790	9.0	K0	13 53 19.055	0.10	4	69.289	-76 34 20.17	0.11	4	69.289				19636
13469	SP				53 19.001	0.21	4	69.585	-76 34 20.86	0.26	4	69.585				19636
13470	-2	3761	6.95	K2	53 24.633	0.06	2	71.444	-3 25 03.51	0.20	2	71.444		18829		11952
13471	+14	2680	6.15	F5	53 24.919	0.13	6	69.479	+14 18 02.54	0.19	6	69.479	3109	18830	3165	33109
13472	+0	3110	9.0	K2	53 35.544	0.03	2	71.290	-0 08 54.07	0.07	2	71.290				11953
13473	-49	8315	8.0	K2	13 53 38.379	0.11	4	70.139	-49 43 25.92	0.21	4	70.139				1656
13474	-27	9501	6.78	G5	53 40.704	0.13	4	69.271	-27 23 38.50	0.08	4	69.271		18835		11954
13475	-18	3702	8.1	K2	53 43.518	0.05	2	71.901	-18 59 18.52	0.16	2	71.901				11955
13476	-46	8964	8.5	K0	53 49.097	0.13	6	71.701	-47 10 43.97	0.14	5	71.613				1657
13477	-37	9025	7.60	K2	53 51.069	0.03	4	70.574	-38 09 12.25	0.17	4	70.574		18839		11956
13478	+1	2864	8.2	K2	13 53 52.797	0.09	2	70.814	+1 06 21.05	0.27	2	70.814				11957
13479	-57	6408	8.3	G5	53 55.780	0.03	5	70.828	-58 17 19.09	0.17	5	70.828				11958
13480	-41	8306	8.5	K0	53 55.856	0.09	5	71.299	-41 38 48.55	0.22	4	71.087				1658
13481	-9	3807	7.9	F8	53 57.450	0.10	3	71.538	-9 47 23.78	0.33	3	71.538		18844		11959
13482	-63	3070	4.68	K0	54 00.212	0.03	116	71.240	-63 26 34.04	0.03	110	71.220	514	18845	3169	30514
13483	-2	3763	9.0	K5	13 54 10.748	0.24	2	70.899	-2 58 37.23	0.08	2	70.899				11960
13484	-22	3685	7.5	B9	54 11.842	0.11	4	68.863	-22 51 34.81	0.04	4	68.863				11961
13485	-34	9257	7.69	K2	54 12.284	0.17	4	70.614	-34 39 36.17	0.06	4	70.614		18848		11962
13486	-28	10338	7.25	K2	54 25.840	0.06	4	69.387	-28 23 29.77	0.09	4	69.387		18853		11963
13487	-48	8629	8.7	K0	54 32.513	0.06	4	70.528	-48 39 43.81	0.20	4	70.528				1659
13488	-34	9261	8.1	K2	13 54 32.847	0.14	4	70.485	-35 11 52.52	0.11	4	70.485				11964
13489	-65	2553	6.22	K0	54 45.561	0.12	6	69.488	-65 33 25.79	0.14	6	69.488	3110	18861		33110
13490	-38	8938	7.9	K0	54 46.014	0.15	3	69.518	-39 05 26.39	0.19	3	69.518				11965
13491	-50	8149	9.3	G5	54 51.306	0.12	4	69.276	-50 33 33.68	0.20	4	69.276				1660
13492	-35	9144	9.0	K5	54 59.615	0.15	5	71.010	-36 14 10.91	0.16	5	71.010				11966
13493	-56	6051	9.0	G0	13 55 01.023	0.14	4	69.271	-56 32 07.17	0.25	4	69.271				11967
13494	-30	11049	7.5	K0	55 02.138	0.14	4	69.767	-30 43 15.96	0.10	4	69.767				11968
13495	-10	3790	8.8	K2	55 04.658	0.25	2	71.436	-10 40 52.61	0.08	2	71.436				11969
13496	-19	3782	8.6	F0	55 12.193	0.18	5	70.767	-20 24 08.07	0.12	5	70.767				11970
13497	-41	8329	4.05	B3	55 13.229	0.09	6	70.764	-41 51 27.18	0.06	6	70.764		18874		21063
13498	-77	922	6.20	A0	13 55 17.913	0.08	6	69.545	-78 20 50.98	0.08	6	69.545	3111	18877		33111
13498	SP				55 17.957	0.19	6	69.646	-78 20 51.27	0.29	6	69.646	3111	18877		53111
13499	-1	2882	8.5	K2	55 18.239	0.01	2	71.463	-2 04 30.71	0.09	2	71.463				11971
13500	-45	8846	8.5	K2	55 20.663	0.08	4	69.807	-46 03 53.41	0.07	3	69.941				1661
13501	-3	3560	8.2	K5	55 22.176	0.19	2	71.740	-4 08 34.78	0.03	2	71.740				11972
13502	-69	1972	8.1	K5	13 55 29.208	0.09	4	69.863	-69 42 55.57	0.30	4	69.863				19637
13503	-8	3672	8.8	G0	55 33.763	0.11	3	71.938	-8 48 35.96	0.05	2	71.829				11973
13504	-44	9010	4.17	B3	55 34.724	0.05	6	70.116	-44 33 38.11	0.13	6	70.116	3112	18883	3174	33112
13505	+3	2836	7.6	K0	55 35.220	0.26	2	71.773	+3 01 35.43	0.05	2	71.773		18884		11974
13506	-66	2394	7.7	G5	55 38.397	0.17	4	69.914	-66 28 06.92	0.16	4	69.914				19638
13507	-24	11202	5.17	B8	13 55 42.340	0.03	56	71.403	-24 43 44.85	0.03	56	71.403	515	18887	3175	30515
13508	-47	8776	8.0	M0	55 42.525	0.08	4	69.829	-47 33 50.68	0.06	4	69.829				1662
13509	-34	9273	8.6	K5	55 45.333	0.13	4	70.102	-34 42 42.08	0.13	4	70.102				11975
13510	-6	3910	8.3	F2	55 45.972	0.20	3	71.959	-6 37 40.12	0.12	3	71.959				11976
13511	-67	2449	8.11	K2	55 46.755	0.13	5	70.505	-67 36 16.22	0.16	5	70.505		18890		19639
13512	-37	9055	9.2	K2	13 55 59.614	0.16	4	69.899	-38 06 49.19	0.13	4	69.899				11977
13513	-15	3781	8.8	F5	56 03.381	0.11	2	72.274	-15 39 43.83	0.02	2	72.274				11978
13514	-61	4234	7.8	K0	56 03.623	0.14	4	69.716	-61 28 51.52	0.19	4	69.716				11979
13515	-29	10726	7.9	F8	56 07.340	0.06	4	69.437	-29 54 59.59	0.11	4	69.437				11980
13516	-40	8312	9.6	K2	56 08.780	0.21	4	69.805	-40 28 42.82	0.13	4	69.805				1663

13489 SDS, 10.2m, 6"4, 13".

13506 11.5m, 3"7, 26".

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
13517	-82° 587	7.10	K2	13 56 09.994	0.10	4	69.687	-82 40 45.35	0.17	4	69.687	18897			19640
13517	SP			56 09.988	0.13	4	69.760	-82 40 45.03	0.26	4	69.760	18897			19640
13518	-36 8995	7.6	K2	56 10.115	0.17	4	70.748	-37 21 12.61	0.14	4	70.748				11981
13519	-64 2663	7.66	A0	56 12.829	0.10	4	69.804	-65 17 59.23	0.14	4	69.804	18898			19641
13520	+22 2650	5.42	A0	56 18.280	0.12	6	70.175	+21 56 21.04	0.15	6	70.175	3113 18900	3176		33113
13521	-17 3971	6.99	K0	13 56 18.828	0.14	2	70.031	-18 22 49.84	0.25	2	70.031	18901			11982
13522	-72 1469	8.9	K5	56 20.769	0.17	4	69.824	-73 13 49.83	0.08	4	69.824				19642
13523	-43 8700	8.21	K0	56 23.347	0.06	4	70.658	-43 27 38.17	0.11	4	70.658	18903			1664
13524	-23 11410	8.5	K2	56 27.766	0.20	4	70.146	-24 01 13.17	0.25	4	70.146				11983
13525	-72 1471	8.9	K2	56 34.813	0.18	4	69.718	-72 23 52.54	0.13	4	69.718				19643
13526	-27 9530	8.3	K2	13 56 46.922	0.17	5	71.055	-27 35 29.94	0.10	4	71.008				11984
13527	-4 3597	7.30	F8	56 50.763	0.37	2	71.463	-5 10 48.23	0.18	2	71.463	18912			11985
13528	-64 2667	9.25	B8	56 53.890	0.23	4	69.419	-64 33 09.29	0.14	4	69.419	18913			19644
13529	-34 9283	8.7	K5	56 58.540	0.16	4	69.748	-35 22 06.95	0.12	4	69.748				11986
13530	-49 8364	8.5	K0	57 00.730	0.10	3	69.313	-49 58 48.94	0.14	3	69.313				1665
13531	-62 3824	8.7	K0	13 57 05.821	0.06	4	69.783	-62 23 30.46	0.19	4	69.783				11987
13532	-21 3813	8.6	K0	57 06.217	0.12	4	70.274	-22 06 09.59	0.17	4	70.274				11988
13533	-43 8710	8.5	K0	57 08.069	0.11	5	70.609	-43 58 47.68	0.18	4	70.224				1666
13534	-59 5338	8.0	G5	57 10.251	0.09	4	69.785	-59 39 30.18	0.15	4	69.785				11989
13535	+0 3118	7.82	G5	57 11.012	0.09	2	71.482	+0 17 28.80	0.48	2	71.482			3177	11990
13536	-24 11215	5.80	F0	13 57 11.421	0.03	53	71.273	-24 46 03.63	0.04	51	71.238	1361 18918	3178		31361
13537	-2 3768	6.30	F5	57 13.584	0.03	38	71.756	-3 18 26.57	0.04	38	71.756	1362 18919	3179		31362
13538	-22 3703	8.1	K2	57 15.048	0.10	4	70.286	-23 11 06.57	0.05	4	70.286				11991
13539	-12 3933	8.1	K0	57 25.972	0.09	2	71.731	-13 13 30.23	0.12	2	71.731			3180	11992
13540	-34 9287	9.1	A0	57 26.720	0.10	4	70.497	-35 02 20.75	0.07	4	70.497				18454
13541	-45 8875	9.0	K0	13 57 29.278	0.15	4	70.582	-45 32 02.58	0.21	4	70.582				1667
13542	-32 9769	9.0	K5	57 29.642	0.16	4	70.571	-32 49 03.08	0.09	4	70.571				11993
13543	+4 2811	8.4	G0	57 31.924	0.03	2	71.777	+4 30 54.49	0.37	2	71.777				11994
13544	-48 8669	8.5	K2	57 34.178	0.04	4	70.523	-49 01 59.49	0.06	4	70.523				1668
13545	-14 3846	7.9	K0	57 45.736	0.01	2	71.439	-14 42 36.70	0.44	2	71.439			3181	11995
13546	-35 9187	9.0	K5	13 57 53.086	0.13	4	70.781	-36 19 29.78	0.18	4	70.781				11996
13547	-33 9486	8.7	K0	57 56.344	0.07	4	70.557	-33 53 10.76	0.07	4	70.557				11997
13548	-51 7903	8.9	F2	58 01.586	0.14	4	69.789	-51 30 19.71	0.14	4	69.789				1669
13549	-50 8188	8.5	K2	58 03.434	0.14	5	70.940	-50 56 52.58	0.17	5	70.940				1670
13550	-68 2062	8.5	F2	58 03.847	0.17	4	70.320	-68 47 58.69	0.15	4	70.320				19645
13551	-1 2888	8.3	A5	13 58 05.714	0.05	2	71.434	-1 50 28.78	0.35	2	71.434			3182	11998
13552	-15 3785	8.8	K5	58 07.475	0.11	2	70.930	-16 05 00.42	0.16	2	70.930				11999
13553	-7 3751	8.1	K0	58 13.125	0.05	2	72.036	-7 49 47.28	0.25	2	72.036	18933			12000
13554	-39 8629	7.5	K5	58 20.549	0.17	5	70.826	-39 25 42.63	0.12	5	70.826				12001
13555	-14 3849	9.0	K0	58 28.869	0.13	3	71.221	-14 37 01.81	0.12	2	70.754				12002
13556	-30 11098	8.8	G5	13 58 29.132	0.09	4	69.916	-31 06 09.29	0.17	4	69.916				12003
13557	-11 3650	8.7	K0	58 30.913	0.07	2	70.885	-11 41 21.38	0.14	2	70.885				12004
13558	-9 3830	8.7	F5	58 34.134	0.12	2	72.381	-10 08 09.49	0.06	2	72.381				12005
13559	-44 9042	9.2	K0	58 40.730	0.08	4	70.280	-45 02 58.45	0.14	4	70.280				1671
13560	-46 9024	9.0	K2	58 45.963	0.13	4	69.846	-46 24 37.93	0.17	4	69.846				1672
13561	+9 2835	5.88	A2	13 58 51.895	0.10	6	69.239	+9 08 09.34	0.10	6	69.239	3114 18941			33114
13562	+1 2872	8.6	K0	58 51.979	0.17	2	72.326	+1 14 37.35	0.08	2	72.326				12006
13563	+28 2287	6.12	A3	58 54.284	0.03	56	71.208	+27 37 38.72	0.07	55	71.221	517 18943	3185		80517
13564	-70 1700	8.8	B8	58 55.659	0.14	4	70.636	-70 54 05.29	0.07	4	70.636				19646
13565	-9 3832	8.6	F0	58 58.758	0.13	2	72.786	-9 41 57.60	0.19	2	72.786				12007
13566*	-51 7911	8.5	G0	13 59 03.091	0.12	4	70.227	-52 18 44.94	0.11	4	70.227				12008
13567	+4 2816	8.2	G5	59 03.355	0.03	3	71.928	+4 29 37.35	0.17	3	71.928				12009
13568	+2 2761	4.34	A2	59 05.963	0.05	28	71.881	+1 47 07.95	0.05	27	71.904	516 18945	3186		30516
13569	-4 3604	8.3	K2	59 06.669	0.11	3	72.601	-5 25 32.31	0.28	3	72.601				12010
13570	-17 3982	8.6	K2	59 06.834	0.01	2	72.811	-17 39 09.32	0.06	2	72.811				12011
13571	-62 3856	8.4	G0	13 59 09.805	0.18	4	70.384	-63 19 37.86	0.21	4	70.384				12012
13572	+2 2763	8.4	K2	59 12.519	0.06	2	72.420	+1 58 56.37	0.14	2	72.420				12013
13573	-53 5844	8.8	F0	59 12.622	0.13	4	70.567	-54 13 26.86	0.13	4	70.567				12014
13574	-53 5845	8.2	K5	59 13.435	0.08	5	70.919	-53 45 09.76	0.18	5	70.919				12015
13575	-41 8399	8.5	G5	59 15.571	0.08	3	70.633	-41 58 04.87	0.14	3	70.633				1673
13576	-40 8353	8.5	K0	13 59 27.434	0.09	4	70.137	-40 34 28.88	0.16	3	70.381				1674
13577*	-59 5359	8.1	G5	59 30.855	0.10	4	70.218	-60 15 45.60	0.10	4	70.218				12016
13578	-55 5843	8.9	K0	59 37.558	0.13	3	69.816	-56 04 29.69	0.09	3	69.816				12017
13579	-19 3799	7.16	F8	59 46.756	0.08	2	71.968	-19 34 10.03	0.02	2	71.968	18961			12018
13580	-26 10063	7.28	G5	59 47.850	0.20	4	70.109	-26 36 26.98	0.14	4	70.109	18962			12019
13581	-20 3943	8.0	K5	13 59 53.117	0.09	5	70.777	-21 25 16.41	0.24	5	70.777				12020
13582	-28 10401	8.8	F0	59 54.137	0.09	5	70.681	-29 09 32.29	0.20	4	70.316				12021
13583	-56 6107	8.1	K0	59 57.181	0.09	4	71.120	-57 06 32.36	0.11	4	71.120				12022
13584	-68 2070	8.6	K0	14 00 10.824	0.07	4	70.417	-68 22 39.39	0.13	4	70.417				19647
13585	+4 2817	7.6	G0	00 16.382	--	1	72.505	+3 47 11.24	--	1	72.505	18972			12023
13586	-59 5365	0.86	B1	14 00 16.389	0.05	12	70.478	-60 07 58.41	0.07	11	70.409	518 18971	3189		30518
13587	-1 2897	8.7	K0	00 16.677	0.18	2	73.276	-2 08 07.96	0.01	2	73.276				12024
13588	-16 3785	6.53	K0	00 20.149	0.13	4	72.001	-17 07 36.81	0.09	4	72.001	3116 18974	3190		12025
13589	-76 799	5.5v	M3	00 22.701	0.06	22	70.897	-76 33 25.64	0.07	22	70.897	1363 18975	3191		31363
13589	SP			00 22.663	0.10	12	70.536	-76 33 25.78	0.25	11	70.523	1363 18975	3191		51363

13566 9.3m-9.5m, 0°1.

13577 9.1m-9.2m, 0°2, 33°.

13589 5.5m to 6.7m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_{α}	N_{α}	Epoch $_{\alpha}$	Deci 1950.0	ϵ_{δ}	N_{δ}	Epoch $_{\delta}$	FK4	GC	N30	No*
13590	-71	1547	7.8	G0	14 00 22.727	0.04	4	70.670	-71 49 47.65	0.17	4	70.670	1364	18976	3192	19648
13591	-40	8373	6.44	A0p	00 23.987	0.05	12	70.231	-41 10 59.79	0.08	11	70.054				31364
13592	-42	8987	8.5	K0	00 24.886	0.18	4	70.920	-42 55 48.78	0.24	4	70.920				1675
13593	-24	11260	7.6	K0	00 32.869	0.08	4	69.449	-24 32 47.73	0.15	4	69.449				12026
13594	-47	8839	9.0	K5	00 34.709	0.21	5	71.694	-47 30 19.25	0.27	4	71.578				1676
13595	-29	10777	8.3	K2	14 00 37.808	0.04	4	70.342	-30 21 28.38	0.03	4	70.342				12027
13596	-69	1992	7.70	F2	00 39.215	0.18	4	70.341	-69 37 57.31	0.19	4	70.341	18979			19649
13597	-67	2480	8.3	K0	00 39.726	0.05	4	70.673	-67 23 56.28	0.21	4	70.673				19650
13598	+ 0	3128	7.88	F0	00 50.618	0.30	2	71.299	- 0 23 17.25	0.06	2	71.299			3194	12028
13599	-10	3811	7.8	K5	00 51.206	0.02	2	72.762	-10 29 29.26	0.06	2	72.762				12029
13600	-19	3804	8.7	F5	14 00 54.207	0.13	2	72.724	-19 42 01.39	0.28	2	72.724				12030
13601	-33	9521	9.2	K5	00 58.804	0.13	4	71.473	-33 54 48.73	0.28	4	71.473				12031
13602	-12	3950	8.7	G0	01 00.890	0.15	2	72.893	-13 02 55.95	0.23	2	72.893				12032
13603	-37	9121	7.9	K0	01 00.917	0.08	6	71.704	-38 13 11.95	0.11	5	71.616				12033
13604	-37	9123	7.9	K5	01 02.865	0.16	4	70.646	-37 31 58.34	0.13	4	70.646				12034
13605	-21	3824	6.21	F2	14 01 05.381	0.07	6	70.688	-22 10 55.39	0.11	6	70.688	3117	18986	3195	33117
13606	- 9	3841	7.3	K0	01 18.203	0.11	2	72.399	- 9 30 20.93	0.34	2	72.399				12035
13607	-32	9819	9.42	K2	01 18.699	0.09	5	71.815	-32 51 57.82	0.17	4	71.732	18992			12036
13608	-12	3952	8.4	A0	01 19.398	0.08	2	72.765	-12 30 46.94	0.14	2	72.765				12037
13609	-14	3861	8.8	K0	01 24.478	0.04	3	73.270	-15 14 47.58	0.07	3	73.270				12038
13610	+ 5	2836	6.28	F2	14 01 24.998	0.13	7	71.825	+ 5 08 25.52	0.11	6	71.609	3118	18993	3197	33118
13611	- 3	3572	8.5	G5	01 25.621	0.04	2	72.890	- 3 44 56.33	0.28	2	72.890				12039
13612	- 6	3924	8.7	K5	01 26.739	0.03	2	73.268	- 7 06 16.79	0.19	2	73.268				12040
13613	+ 0	3130	8.5	F5	01 28.328	0.07	2	73.291	- 0 07 22.92	0.07	2	73.291				12041
13614	-29	10790	8.0	M1	01 30.469	0.07	4	70.632	-29 39 37.09	0.11	4	70.632				12042
13615	-28	10419	7.5	G5	14 01 33.959	0.14	4	70.620	-28 49 24.42	0.16	4	70.620				12043
13616	- 4	3614	6.72	K0	01 37.681	0.01	2	72.705	- 5 08 31.34	0.01	2	72.705		18996		12044
13617	+ 4	2822	9.3	K0	01 38.818	0.12	2	72.815	+ 4 25 02.82	0.20	2	72.815				12045
13618	-55	5866	8.3	K0	01 39.191	0.13	4	69.354	-55 53 59.46	0.20	4	69.354				12046
13619	-14	3863	6.36	K0	01 44.206	0.15	5	72.005	-14 43 56.65	0.07	5	72.005	1365	18999	3198	31365
13620	+ 3	2847	8.1	K0	14 01 47.261	0.06	3	71.946	+ 2 50 48.36	0.33	2	71.851				12047
13621	-33	9532	9.1	K5	01 50.914	0.11	4	71.024	-34 19 26.69	0.30	4	71.024				12048
13622	-80	701	7.78	F0	02 00.280	0.16	4	69.827	-80 31 33.60	0.13	4	69.827	19000			19651
13622	SP				02 00.276	0.12	4	69.797	-80 31 33.88	0.21	4	69.797	19000			19651
13623	-75	927	9.1	A0	02 02.649	0.12	5	70.710	-75 50 01.71	0.06	4	70.578				19652
13623	SP				02 02.502	0.33	5	70.609	-75 50 00.84	0.41	4	70.591				19652
13624	-77	930	8.5	G5	02 06.923	0.24	5	70.789	-77 35 41.19	0.16	5	70.789				19653
13624	SP				02 06.843	0.23	4	70.260	-77 35 40.58	0.07	4	70.260				19653
13625	-78	841	7.9	K0	02 12.987	0.20	4	69.684	-79 00 48.09	0.16	4	69.684				19654
13625	SP				02 12.949	0.22	4	69.589	-79 00 47.85	0.59	4	69.589				19654
13626	-65	2600	9.3	G5	14 02 20.085	0.12	4	69.893	-65 29 07.50	0.25	4	69.893				19655
13627	-36	9079	9.1	G5	02 24.223	0.04	4	70.861	-36 26 16.09	0.12	4	70.861	3119	19006	3200	12049
13628	-54	5887	6.30	A3	02 24.504	0.05	6	69.179	-54 25 49.76	0.09	6	69.179				33119
13629	-56	6137	8.6	K0	02 25.433	0.09	4	70.387	-57 01 55.31	0.14	4	70.387				12050
13630	- 6	3930	7.5	K0	02 34.577	0.03	2	71.774	- 7 02 16.04	0.24	2	71.774				12051
13631	-22	3716	8.5	K2	14 02 36.166	0.16	4	69.395	-22 55 34.07	0.07	4	69.395				12052
13632	- 0	2780	8.7	F8	02 41.414	0.23	3	72.563	- 0 40 39.00	0.18	3	72.563				12053
13633	-58	5360	8.9	K0	02 51.844	0.10	4	70.298	-59 15 14.82	0.19	4	70.298				12054
13634	-35	9251	8.5	K2	02 54.865	0.19	4	70.074	-35 46 43.92	0.13	4	70.074				12055
13635	-40	8405	4.54	B3	02 58.958	0.05	6	72.203	-40 56 27.96	0.09	6	72.203		19017		21064
13636	-61	4332	7.22	M0	14 03 07.700	0.15	4	69.907	-62 08 10.17	0.12	4	69.907		19022		12056
13637	-56	6148	8.2	K0	03 18.500	0.12	4	69.835	-56 36 33.78	0.05	4	69.835				12057
13638	-24	11285	7.1	K5	03 21.640	0.11	4	70.130	-24 30 08.28	0.09	4	70.130				12058
13639	-39	8694	7.9	K2	03 26.289	0.09	4	70.845	-39 44 54.31	0.13	4	70.845				12059
13640	-26	10095	3.48	K0	03 31.106	0.02	111	71.177	-26 26 35.45	0.02	109	71.168	519	19029	3203	80519
13641	-11	3664	8.7	K5	14 03 31.947	0.03	2	71.932	-11 35 41.11	0.38	2	71.932				12060
13642	+ 2	2771	8.7	F2	03 33.455	0.19	2	70.694	+ 1 45 08.32	0.64	2	70.694				12061
13643	-41	8462	9.0	K0	03 35.183	0.10	5	71.655	-42 18 54.59	0.07	4	71.524				1677
13644	-41	8464	9.0	K5	03 37.299	0.04	5	71.775	-41 30 16.19	0.13	4	71.679				1678
13645	- 8	3696	6.56	A0	03 38.656	0.04	29	71.217	- 8 39 13.65	0.05	29	71.217	1366	19032	3205	31366
13646	- 5	3806	8.7	K2	14 03 42.580	0.08	2	71.973	- 5 51 52.39	0.44	2	71.973				12062
13647	-35	9260	2.26	K0	03 42.952	0.03	63	71.240	-36 07 40.53	0.04	57	71.205	520	19033	3206	30520
13648	-19	3813	8.3	G0	03 43.579	0.13	2	72.731	-19 50 06.23	0.11	2	72.731				12063
13649	-74	1142	6.03	G0	03 47.187	0.12	6	69.752	-74 36 51.96	0.16	6	69.752	3120	19036		33120
13649	SP				03 47.125	0.07	34	71.260	-74 36 52.20	0.15	31	71.258	3120	19036		53120
13650	- 3	3580	8.0	K2	14 03 48.096	0.13	2	72.278	- 3 55 33.26	0.10	2	72.278				12064
13651	-16	3802	7.8	K5	03 48.630	0.09	2	72.714	-17 13 05.29	-	1	73.217				12065
13652	- 9	3851	8.6	K5	03 54.270	0.07	2	72.754	- 9 51 31.26	0.05	2	72.754				12066
13653	-13	3825	8.4	G5	04 02.624	0.05	2	72.850	-13 51 28.16	0.34	2	72.850				12067
13654	-25	10166	8.4	A5	04 03.756	0.06	5	70.146	-25 43 13.72	0.18	5	70.146				12068
13655	-49	8472	8.5	K0	14 04 04.263	0.09	4	69.910	-49 25 28.35	0.13	4	69.910				1679
13656	-30	11166	8.0	K5	04 05.535	0.10	4	71.050	-30 51 48.48	0.11	4	71.050				12069
13657	-34	9376	7.33	G5	04 09.574	0.04	4	70.111	-35 15 15.39	0.13	4	70.111	19044			12070
13658	-26	10103	8.2	K0	04 10.231	0.08	4	70.747	-27 06 55.01	0.06	4	70.747				12071
13659	-53	5877	8.1	K0	04 11.592	0.16	4	69.791	-54 01 34.70	0.08	4	69.791				12072

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
13660	-53	5878	8.7	K0	14 04 18.564	0.02	4	69.916	-53 44' 22.81	0.14	4	69.916				12073
13661	-18	3750	8.3	G5	04 23.726	0.13	2	72.752	-19 02 48.27	0.18	2	72.752		19050		12074
13662	-15	3809	7.05	B9	04 30.101	0.22	2	70.880	-15 57 11.08	0.26	2	70.880		19056		12075
13663	-50	8273	9.6	K0	04 31.075	0.12	4	69.954	-50 31 11.48	0.28	4	69.954				1680
13664	-23	11493	8.7	A5	04 31.326	0.18	4	70.351	-23 39 19.67	0.13	4	70.351				12076
13665	-62	3941	6.49	K0	14 04 31.454	0.08	6	68.854	-62 58 15.81	0.16	6	68.854	3121	19057	3209	33121
13666	-31	10929	8.5	K2	04 38.700	0.06	5	70.903	-31 38 17.84	0.15	4	70.819				12077
13667	-18	3751	8.8	F5	04 41.503	0.09	2	71.876	-18 32 01.17	0.07	2	71.876				12078
13668	-59	5413	9.04	K5	04 42.220	0.17	4	69.748	-60 17 13.45	0.18	4	69.748		19062		12079
13669	-28	10451	8.4	M2	04 50.499	0.22	4	69.761	-28 47 19.82	0.06	4	69.761				12080
13670	-0	2786	8.4	K0	14 04 59.119	0.02	2	71.754	-0 50 23.56	0.22	2	71.754				12081
13671	-20	3964	8.0	K0	05 06.789	0.15	4	70.551	-20 57 29.28	0.06	4	70.551				12082
13672	+0	3135	7.40	K5	05 16.363	0.11	2	71.411	+0 10 51.62	0.42	2	71.411		19070		12083
13673	-1	2907	8.8	F5	05 22.678	0.00	2	71.761	-1 54 04.06	0.07	2	71.761				12084
13674	-58	5383	6.43	B5	05 23.578	0.10	7	71.040	-59 02 23.66	0.14	7	71.040		19073		21065
13675	-58	5385	8.4	K5	14 05 26.686	0.12	4	69.323	-58 31 33.89	0.24	4	69.323				12085
13676	-73	1241	9.1	K5	05 27.465	0.16	4	69.758	-74 12 23.35	0.27	4	69.758				19656
13677	-0	2787	8.1	K0	05 33.149	0.05	3	71.232	-0 48 41.67	0.44	2	71.226				12086
13678	-25	10180	8.5	F2	05 33.642	0.06	4	69.364	-26 06 44.35	0.09	4	69.364				12087
13679	-15	3812	9.1	F0	05 37.147	0.08	2	70.936	-16 20 08.14	0.12	2	70.936				12088
13680	-64	2744	8.4	K2	14 05 38.020	0.18	4	69.744	-64 32 22.89	0.20	4	69.744				19657
13681	-11	3670	8.3	K2	05 43.337	0.07	2	69.981	-12 19 43.66	0.10	2	69.981		19079		12089
13682	-11	3671	6.75	A2	05 47.971	0.01	2	70.818	-11 35 33.67	0.06	2	70.818		19081		12090
13683	-40	8444	9.0	K0	05 56.119	0.20	4	69.682	-40 38 46.24	0.15	4	69.682				1681
13684	-17	4013	8.8	K5	06 05.615	0.04	2	69.918	-17 29 59.36	0.07	2	69.918				12091
13685	-17	4015	8.3	G5	14 06 15.741	0.02	2	71.373	-18 15 52.21	0.01	2	71.373				12092
13686	-50	8294	6.16	B9	06 17.045	0.05	6	69.044	-51 16 06.12	0.05	6	69.044	3122	19089	3211	33122
13687	-69	2012	6.04	K0	06 18.575	0.09	6	69.054	-70 04 10.44	0.09	6	69.054	3123	19090		33123
13688	-9	3865	6.48	G5	06 20.458	0.01	2	69.928	-10 05 54.44	0.08	2	69.928		19092		12093
13689	-80	703	8.1	K5	06 20.906	0.14	4	69.235	-81 18 23.68	0.27	4	69.235				19658
13689 SP					14 06 20.973	0.10	4	69.848	-81 18 23.36	0.22	4	69.848				19658
13690	-33	9590	8.6	K0	06 22.564	0.16	4	69.678	-33 41 51.10	0.28	4	69.678				12094
13691*	-46	9113	8.5	G5	06 23.200	0.04	4	69.712	-47 14 15.36	0.19	4	69.712				1682
13692	-7	3778	8.6	K0	06 24.745	0.10	2	71.413	-7 46 04.29	0.34	2	71.413				12095
13693	-34	9401	7.65	F8	06 26.772	0.09	4	69.724	-34 38 46.75	0.11	4	69.724		19096		12096
13694	-71	1558	7.9	K5	14 06 30.076	0.04	4	69.250	-71 58 53.37	0.11	4	69.250				19659
13695	-2	3797	8.9	G5	06 46.586	0.21	2	70.802	-2 49 35.47	0.09	2	70.802				12097
13696	-51	7999	9.0	K0	06 54.087	0.05	4	69.310	-51 42 34.12	0.21	4	69.310				1683
13697	-52	7032	8.9	G0	06 55.098	0.21	4	68.802	-52 38 51.14	0.18	4	68.802				12098
13698	+3	2859	6.92	K0	06 56.204	0.02	2	70.839	+3 02 00.94	0.14	2	70.839		19103		12099
13699	-29	10862	8.5	K0	14 07 00.543	0.10	4	68.816	-30 12 25.27	0.20	4	68.816				12100
13700	-44	9126	8.5	K2	07 04.513	0.09	4	69.764	-44 50 32.01	0.04	4	69.764				1684
13701	+0	3142	7.5	K5	07 19.746	0.22	2	70.415	-0 24 56.01	0.13	2	70.415				12101
13702	-7	3782	8.6	K0	07 25.968	0.12	2	71.414	-8 08 10.41	0.02	2	71.414				12102
13703p	+4	2833	8.5	F5	07 26.037	0.18	2	71.429	+4 15 06.58	0.09	2	71.429		19112		12103
13704	-13	3833	7.7	G5	14 07 36.994	0.29	2	70.936	-13 59 05.05	0.10	2	70.936				12104
13705	-54	5914	8.5	K0	07 37.013	0.07	5	69.453	-54 39 42.94	0.21	4	69.753				12105
13706	-39	8752	7.9	G5	07 38.772	0.10	4	70.263	-39 28 48.36	0.15	4	70.263				12106
13707	-36	9154	8.4	K2	07 45.994	0.09	4	69.823	-36 46 56.61	0.10	4	69.823				12107
13708	-47	8949	8.5	K5	07 47.452	0.10	5	70.658	-48 15 42.08	0.15	4	70.287				1685
13709	-38	9138	8.8	K5	14 07 49.437	0.08	4	70.253	-38 57 02.19	0.09	4	70.253				12108
13710	-5	3823	7.3	K0	07 50.995	0.36	2	69.985	-6 19 27.29	0.18	2	69.985				12109
13711	-4	3633	8.2	K0	07 54.316	0.08	2	70.769	-5 13 19.66	0.45	2	70.769				12110
13712	-27	9654	7.3	G5	08 05.214	0.10	4	69.255	-28 07 00.23	0.20	4	69.255				12111
13713	+25	2737	4.82	F5	08 07.034	0.05	53	70.937	+25 19 38.44	0.06	52	70.931	522	19127	3215	30522
13714	-37	9209	8.3	K0	14 08 07.519	0.16	5	70.644	-37 40 11.60	0.13	5	70.644				12112
13715	-45	8984	8.21	K0	08 09.543	0.14	4	70.248	-45 33 43.11	0.06	4	70.248		19128		1686
13716	+1	2895	6.69	A2	08 14.636	0.13	2	69.902	+1 02 05.93	0.08	2	69.902		19130		12113
13717	-46	9138	8.7	G5	08 20.400	0.06	4	69.713	-46 27 41.42	0.13	4	69.713				1687
13718	-1	2916	8.0	K0	08 23.149	0.03	3	71.374	-2 26 22.25	0.04	2	71.438				12114
13719	-29	10879	7.45	K0	14 08 25.125	0.05	4	69.306	-29 32 58.77	0.08	4	69.306		19134	3217	12115
13720	-22	3740	8.0	K0	08 26.673	0.15	4	69.362	-23 24 25.50	0.13	4	69.362				12116
13721	-22	3741	8.4	A2	08 26.856	0.15	4	69.377	-22 35 26.39	0.05	4	69.377				12117
13722	-16	3822	8.8	K0	08 29.599	0.12	2	70.978	-16 47 23.55	0.10	2	70.978				12118
13723	-14	3893	9.0	K0	08 30.206	0.13	2	70.362	-14 58 31.08	0.39	2	70.362				12119
13724	-31	10973	7.31	F2	14 08 33.014	0.08	4	69.674	-31 56 01.30	0.31	4	69.674		19137		12120
13725	-72	1499	8.5	M1	08 36.781	0.18	4	69.752	-73 11 31.17	0.10	4	69.752				19660
13726	-59	5449	8.1	K2	08 36.823	0.09	4	69.304	-59 34 11.43	0.18	4	69.304				12121
13727	-55	5918	9.0	K2	08 42.791	0.12	4	69.714	-56 02 21.04	0.08	4	69.714				12122
13728	-24	11334	8.0	K0	08 45.590	0.05	4	69.441	-24 56 49.35	0.18	4	69.441				12123
13729	+2	2782	8.2	G5	14 08 45.835	0.10	2	70.859	+1 48 25.52	0.18	2	70.859				12124
13730	-31	10978	9.1	K2	08 51.498	0.14	3	69.737	-31 25 40.86	0.07	4	69.430				12125
13731	-65	2642	7.9	K2	08 54.252	0.13	4	69.833	-66 13 05.78	0.19	4	69.833				19661
13732	-11	3683	8.8	K5	08 54.281	0.26	2	70.955	-11 39 27.11	0.18	2	70.955				12126
13733*	-53	5907	8.4	G5	08 59.613	0.02	5	70.068	-53 25 33.33	0.19	5	70.068				12127

13691 8.8m-9.3m, 0°6, 77°.
13703 A 9134, 9.3m, 4°8, 33°.

13733 8.6m-10.6m, 0°5, 57°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
13734	-18	3766	7.9	K0	14 08 59.768	0.18	3	71.311	-18 46 58.51	0.08	3	71.311				12128
13735	-63	3164	8.8	G5	09 07.016	0.19	4	69.254	-6 55 33.72	0.16	4	69.254				12129
13736*	-9	3874	8.7	G0	09 15.351	0.20	2	69.851	-9 43 49.43	0.01	2	69.851				12130
13737	-34	9442	8.5	K5	09 34.514	0.27	4	69.685	-3 10 30.17	0.13	4	69.685				12131
13738	-82	593	8.9	K0	09 39.462	0.28	4	69.289	-83 18 55.06	0.10	4	69.289				19662
13738 SP					14 09 39.041	0.25	4	69.585	-83 18 55.07	0.20	4	69.585				19662
13739	+3	2867	4.90	A0p	09 43.714	0.09	6	69.437	+2 38 37.55	0.03	6	69.437	3127	19157		33127
13740	-2	3802	8.1	F0	09 55.734	0.02	2	70.728	-2 44 16.04	0.10	2	70.728		19164		12132
13741	-60	5239	8.8	G5	10 04.233	0.08	4	69.199	-61 14 03.63	0.12	4	69.199				12133
13742	-43	8880	9.0	G5	10 05.388	0.14	4	69.790	-43 46 44.33	0.15	4	69.790				1688
13743	-2	3804	7.4	G0	14 10 09.767	0.28	2	69.981	-3 05 01.24	0.01	2	69.981		19166		12134
13744	-9	3878	4.31	K0	10 13.463	0.02	133	71.809	-10 02 27.72	0.03	131	71.805	523	19168	3220	30523
13745	-35	9337	9.0	K2	10 27.630	0.16	4	69.743	-35 31 15.85	0.08	4	69.743				12135
13746	-14	3900	8.8	A5	10 28.877	--	1	71.378	-15 23 26.97	--	1	71.378				12136
13747	-50	8351	9.3	K0	10 30.701	0.12	4	69.291	-50 39 40.47	0.15	4	69.291				1689
13748	-7	3793	8.3	K0	14 10 38.081	0.10	2	71.301	-8 26 08.21	0.22	2	71.301				12137
13749	-65	2655	6.84	B5	10 45.338	0.09	6	70.653	-65 28 05.84	0.08	6	70.653		19180		21066
13750	-21	3864	8.5	K5	10 54.770	0.06	4	68.828	-22 14 11.44	0.15	4	68.828				12138
13751	-47	8987	7.98	K0	10 55.100	0.11	4	69.696	-48 20 39.51	0.10	4	69.696		19185		1690
13752	-49	8563	9.2	K2	10 58.272	0.09	4	69.835	-50 12 14.09	0.13	4	69.835				1691
13753	+13	2762	8.4	G0	14 11 01.331	0.12	4	68.699	+12 48 26.31	0.16	4	68.699				26967
13754	-11	3693	6.92	G5	11 01.618	0.18	2	69.802	-11 36 18.34	0.12	2	69.802		19187		12139
13755	-47	8989	8.5	K0	11 03.192	0.21	4	69.721	-47 36 24.84	0.10	4	69.721				1692
13756	-69	2023	8.5	K0	11 04.920	0.12	4	70.305	-70 11 03.29	0.14	4	70.305				19663
13757	-12	4003	8.1	K5	11 05.150	0.34	2	71.434	-13 06 28.43	0.31	2	71.434				12140
13758	-41	8583	8.9	G5	14 11 08.262	0.05	4	69.762	-41 39 19.14	0.19	4	69.762				1693
13759	+1	2901	8.7	K	11 08.672	0.07	2	70.362	+0 56 40.49	0.08	2	70.362				12141
13760	-67	2534	7.5	G0	11 11.765	0.06	4	69.781	-67 25 31.47	0.20	4	69.781				19664
13761	-45	9026	8.28	M0	11 12.300	0.09	4	69.763	-45 32 18.19	0.10	4	69.763		19191		1694
13762	-19	3836	8.1	G0	11 12.897	0.13	4	69.274	-19 58 28.86	0.20	4	69.274		19192		12142
13763	-51	8051	8.6	K5	14 11 12.936	0.10	4	69.391	-51 49 38.80	0.28	4	69.391				1695
13764	-16	3829	8.3	K0	11 26.517	0.04	2	71.920	-17 13 49.53	0.75	2	71.920				12143
13765	-56	6206	5.20	B3	11 27.017	0.07	7	71.224	-56 51 11.55	0.16	7	71.224		19199		21067
13766	-42	9150	9.0	K0	11 27.419	0.10	5	70.630	-42 26 47.32	0.16	5	70.630				1696
13767	-1	2923	8.9	K0	11 28.284	0.13	2	71.449	-1 33 28.31	0.10	2	71.449				12144
13768	-3	3596	8.7	K0	14 11 29.407	0.41	2	71.482	-3 31 02.69	0.30	2	71.482				12145
13769	-44	9171	9.0	K0	11 35.389	0.09	5	70.642	-44 29 51.53	0.11	4	70.266				1697
13770	+4	2840	8.7	K2	11 39.849	0.09	4	72.319	+4 11 45.26	0.17	3	72.373				12146
13771	-5	3837	6.29	G0	11 44.362	0.01	2	71.467	-5 42 56.11	0.26	2	71.467		19209		12147
13772	+0	3152	9.0	K0	11 48.619	0.43	3	72.568	-0 22 06.66	0.16	3	72.568				12148
13773	-80	706	4.97	A2p	14 11 48.694	0.10	6	68.684	-80 46 32.34	0.10	6	68.684	3129	19211	3223	33129
13773 SP					11 48.767	0.08	6	69.162	-80 46 32.69	0.27	6	69.162	3129	19211	3223	53129
13774	-27	9693	7.5	F8	11 49.081	0.17	4	69.360	-27 31 44.04	0.17	4	69.360				12149
13775	-62	4016	7.36	K0	11 52.095	0.17	4	69.901	-62 52 53.65	0.09	4	69.901		19212		12150
13776	-38	9196	8.6	G5	11 59.184	0.09	5	70.652	-38 57 22.23	0.21	4	70.280				12151
13777	-4	3645	8.2	K0	14 11 59.848	0.18	2	70.694	-5 05 39.64	0.19	2	70.694				12152
13778	-20	3989	7.4	K0	12 04.125	0.13	4	69.753	-20 49 56.05	0.11	4	69.753				12153
13779	+3	2872	8.8	F2	12 06.038	0.05	3	71.984	+2 43 44.70	0.27	3	71.984				12154
13780	-28	10528	6.03	A0	12 07.044	0.07	5	70.391	-29 02 57.57	0.07	4	70.179		19218		12155
13781	-17	4043	8.8	G5	12 08.682	0.03	2	70.433	-18 23 11.30	0.12	2	70.433				12156
13782	-66	2486	8.8	G5	14 12 12.882	0.17	4	69.839	-66 40 12.64	0.03	4	69.839				19665
13783	-26	10186	8.5	K5	12 14.952	0.05	4	70.152	-26 59 51.56	0.07	4	70.152				12157
13784	-52	7090	8.3	K5	12 16.525	0.22	4	69.830	-52 44 07.91	0.05	4	69.830				12158
13785	-23	11582	8.7	K0	12 18.040	0.15	4	69.962	-23 58 38.63	0.16	4	69.962				12159
13786	+4	2841	6.62	M0	12 21.574	0.31	2	69.981	+3 34 06.31	0.28	2	69.981		19223	3224	12160
13787	+22	2678	6.40	A2	14 12 21.942	0.14	6	69.198	+22 06 21.17	0.20	6	69.198	3130	19224	3225	33130
13788	+10	2654	5.36	G5	12 23.763	0.08	6	69.533	+10 20 03.61	0.08	6	69.533	3131	19226		33131
13789	-65	2661	9.0	A0	12 23.847	0.10	4	70.309	-65 57 41.05	0.03	4	70.309				19666
13790	-33	9668	8.9	F0	12 26.462	0.14	4	70.227	-33 36 52.85	0.05	4	70.227				12161
13791	+2	2795	8.9	F5	12 26.745	0.43	2	70.958	+2 07 43.87	0.25	2	70.958				12162
13792	-75	949	7.28	M0	14 12 40.700	0.18	4	69.730	-75 51 24.73	0.17	4	69.730		19231		19667
13792 SP					12 40.542	0.07	4	69.827	-75 51 24.46	0.19	4	69.827		19231		19667
13793	-11	3696	8.0	A5	12 41.398	0.32	2	70.760	-12 00 37.25	0.04	2	70.760				12163
13794	-37	9268	8.5	K0	12 46.493	0.08	3	70.246	-37 22 03.62	0.13	3	70.246				12164
13795	-6	3955	7.5	K0	13 03.479	0.07	2	70.884	-7 26 01.57	0.18	2	70.884				12165
13796	-31	11031	9.1	K5	14 13 05.749	0.13	4	70.376	-31 27 41.92	0.12	4	70.376				12166
13797	-15	3837	8.0	K0	13 05.922	0.62	2	71.434	-15 50 58.32	0.05	2	71.434			3227	12167
13798	-60	5262	8.1	K0	13 06.043	0.09	4	69.711	-60 57 09.15	0.17	4	69.711				12168
13799	-57	6570	7.6	K0	13 07.386	0.13	5	70.513	-58 05 36.57	0.14	5	70.513				12169
13800	-32	9981	8.8	K5	13 15.804	0.08	4	69.749	-32 41 40.98	0.06	4	69.749				12170
13801	-8	3733	8.7	F8	14 13 18.313	0.10	3	71.319	-9 08 49.04	0.26	2	71.356				12171
13802	-32	9982	6.56	F0	13 20.322	0.11	7	70.451	-33 00 35.07	0.14	7	70.451	3132	19240	3228	33132
13803	+19	2777	0.24	K0	13 21.081	0.07	24	71.325	+19 25 48.16	0.06	24	71.325	526	19242	3229	30526
13804	-5	3843	4.16	F5	13 23.330	0.02	143	71.390	-5 45 55.91	0.02	137	71.383	525	19244	3230	80525
13805	-34	9488	9.0	K5	13 25.765	0.13	4	70.637	-34 32 57.07	0.18	4	70.637				12172

13736 9.2m-10.3m, 0°6, 155°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
13806	-39	8813	9.2	K5	14 13 39.373	0.08	4	69.763	-39 31 02.31	0.14	4	69.763				12173
13807	-30	11292	8.6	G5	13 48.247	0.12	4	70.260	-30 43 38.13	0.22	4	70.260				12174
13808	-46	9217	7.0	K5	13 55.984	0.08	4	69.754	-46 40 46.09	0.10	4	69.754				1698
13809	-60	5272	8.6	K0	14 03.286	0.13	4	68.780	-61 16 20.38	0.14	4	68.780				12175
13810	-17	4053	6.37	G5	14 17.571	0.02	2	69.892	-18 21 16.66	0.25	2	69.892	19265			12176
13811	-0	2802	8.9	K2	14 14 20.269	0.10	2	71.456	-1 07 00.51	0.69	2	71.456				12177
13812	-56	6224	8.7	G5	14 22.495	0.14	4	69.817	-56 36 24.49	0.09	4	69.817				12178
13813	-40	8556	8.6	K0	14 23.014	0.18	4	69.763	-40 52 41.57	0.05	4	69.763				1699
13814	-21	3877	8.0	G5	14 24.003	0.12	4	70.523	-21 33 21.67	0.17	4	70.523				12179
13815	-13	3864	8.9	F5	14 24.375	0.13	2	70.051	-13 47 08.17	0.40	2	70.051				12180
13816	+0	3158	9.0	F8	14 27.687	0.06	2	71.525	+0 09 09.61	0.12	3	71.480				12181
13817	-70	1735	7.8	M1	14 31.266	0.13	5	70.940	-71 09 58.03	0.11	5	70.940				19668
13818	-52	7120	8.6	G5	14 31.952	0.12	4	70.248	-52 22 04.22	0.22	4	70.248				12182
13819	-36	9250	9.0	G5	14 33.909	0.16	4	69.805	-36 22 06.72	0.07	4	69.805				12183
13820	-69	2032	8.8	G5	14 34.239	0.21	4	69.925	-69 34 10.94	0.19	4	69.925				19669
13821	-19	3846	6.89	A3	14 40.559	0.08	2	71.429	-19 43 58.15	0.61	2	71.429	19278	3236		12184
13822	-3	3606	8.5	G5	14 44.228	0.15	2	70.760	-4 02 07.28	0.03	2	70.760				12185
13823	-23	11613	7.8	K0	14 50.342	0.16	5	71.051	-24 19 28.59	0.10	4	71.004				12186
13824	-28	10561	8.6	K5	14 57.866	0.07	4	70.663	-28 52 06.47	0.10	4	70.663				12187
13825	-15	3842	9.1	G0	15 04.681	0.31	2	72.016	-15 47 41.94	0.01	2	72.016				12188
13826	-53	5940	7.68	K0	14 15 05.200	0.10	4	70.163	-53 53 55.86	0.10	4	70.163	19285			12189
13827	-45	9069	8.5	G5	15 10.201	0.09	4	69.758	-45 40 29.29	0.16	4	69.758				1700
13828	-73	1267	6.62	B8	15 13.243	0.10	6	69.820	-73 44 18.75	0.20	6	69.820	3133	19287		33133
13828	SP				15 13.161	0.09	32	71.400	-73 44 19.49	0.18	30	71.442	3133	19287		53133
13829	-24	11404	8.7	G5	15 19.093	0.06	4	70.571	-25 09 27.94	0.17	4	70.571				12190
13830	-5	3852	7.7	K2	14 15 19.474	0.04	2	70.369	-5 44 28.28	0.28	2	70.369				12191
13831	-14	3918	8.9	F5	15 21.713	0.21	2	71.456	-14 40 53.47	0.34	2	71.456				12192
13832	-53	5942	8.9	F0	15 29.465	0.09	4	69.858	-54 14 09.78	0.13	4	69.858				12193
13833	+1	2910	8.4	G0	15 33.521	0.06	3	71.698	+1 22 32.23	0.51	2	71.924				12194
13834	-18	3787	8.8	G5	15 39.258	0.13	2	71.473	-19 19 55.91	0.18	2	71.473				12195
13835	-56	6238	7.8	K2	14 15 40.880	0.10	4	70.339	-57 11 32.94	0.10	4	70.339				12196
13836	-28	10582	8.3	F2	15 44.046	0.07	4	70.864	-29 06 18.93	0.10	4	70.864				12197
13837	-31	11073	8.3	F5	15 46.934	0.06	4	69.799	-32 11 45.80	0.25	4	69.799				12198
13838	-18	3789	5.74	A0p	15 51.927	0.03	69	71.327	-18 29 08.49	0.04	68	71.314	1369	19295	3240	31369
13839	-8	3748	8.7	K0	15 52.338	0.17	2	71.969	-9 10 44.79	0.11	2	71.969				12199
13840	+4	2847	7.14	K0	14 15 58.552	0.10	2	72.293	+3 54 16.86	0.03	2	72.293	19298			12200
13841	-33	9715	8.8	K5	16 03.711	0.05	4	69.876	-34 10 44.80	0.15	4	69.876				12201
13842	-11	3711	7.7	K2	16 07.454	0.06	2	70.740	-11 49 59.89	0.22	2	70.740				12202
13843	-67	2556	9.1	K0	16 11.090	0.13	4	70.951	-68 18 25.10	0.21	4	70.951				19670
13844	-45	9084	4.10	B3	16 11.406	0.05	7	71.424	-45 49 42.27	0.10	7	71.424	19304			21068
13845	-79	755	5.20	B5	14 16 13.210	0.10	7	71.550	-79 52 48.83	0.17	6	71.601	19305			21069
13846	-26	10223	6.56	K2	16 14.161	0.12	4	70.766	-26 54 41.56	0.12	4	70.766	19306			12203
13847	-22	3765	7.8	A0	16 16.109	0.18	4	71.251	-22 43 25.88	0.16	4	71.251				12204
13848	-12	4018	4.60	A2	16 23.955	0.06	14	70.055	-13 08 30.41	0.05	14	70.055	1371	19311	3244	31371
13849	-9	3909	8.5	K0	16 25.990	0.12	2	71.204	-10 22 50.38	0.32	2	71.204				12205
13850	-40	8586	8.0	K0	14 16 26.080	0.09	4	69.872	-40 43 25.08	0.11	4	69.872				1701
13851	+4	2849	8.9	M0	16 30.603	0.22	2	73.160	+4 24 33.55	0.17	2	73.160				12206
13852	-13	3869	7.5	M1	16 31.477	0.04	2	70.815	-14 10 42.06	0.21	2	70.815				12207
13853	-79	756	7.4	M1	16 35.476	0.21	6	70.443	-79 29 14.70	0.19	6	70.443				19671
13853	SP				16 35.496	0.08	4	69.597	-79 29 14.50	0.25	4	69.597				19671
13854	-23	11627	8.6	G5	14 16 37.622	0.13	4	70.614	-24 01 55.12	0.08	4	70.614				12208
13855	-17	4065	7.6	A2	16 39.526	0.07	2	72.757	-18 17 39.02	0.25	2	72.757	19312			12209
13856	-7	3818	8.3	G5	16 40.392	0.15	2	71.683	-7 37 08.02	0.10	2	71.683				12210
13857	-58	5481	8.3	G5	16 43.422	0.19	4	70.355	-58 58 08.09	0.27	4	70.355				12211
13858	-55	5984	4.41	B5	16 48.904	0.03	53	70.669	-56 09 26.50	0.04	50	70.580	529	19318	3246	30529
13859	-1	2937	8.0	F5	14 16 49.514	0.04	2	73.266	-1 52 08.19	0.24	2	73.266				12212
13860	-35	9420	9.1	G5	16 50.457	0.14	5	70.719	-35 32 58.35	0.11	4	70.360				12213
13861	+13	2782	5.31	F0	16 51.115	0.03	58	70.442	+13 14 02.11	0.04	57	70.428	1372	19319	3247	81372
13862	-57	6602	8.4	G0	16 51.691	0.11	5	71.313	-57 45 16.57	0.10	5	71.313				12214
13863	+0	3162	8.5	K2	16 53.266	0.13	2	73.275	+0 12 56.88	0.29	2	73.275				12215
13864	-71	1576	7.5	G5	14 16 55.668	0.01	4	71.070	-72 05 19.68	0.12	4	71.070				19672
13865	-36	9278	8.7	G5	16 56.169	0.06	3	71.266	-36 37 26.78	0.11	3	71.266				12216
13866	-1	2938	5.24	K0	16 57.523	0.09	6	69.520	-2 02 08.46	0.16	6	69.520	3134	19323	3249	33134
13867	-4	3665	7.6	K0	16 58.919	0.41	2	72.860	-4 55 16.16	0.22	2	72.860	19326			12217
13868	+2	2802	8.7	F8	17 01.589	0.13	2	72.742	+1 51 28.45	0.11	2	72.742				12218
13869	-72	1515	9.1	K0	14 17 03.372	0.14	4	70.324	-73 05 07.34	0.18	4	70.324				19673
13870	-27	9764	7.06	A0	17 14.461	0.09	4	69.858	-27 49 11.60	0.04	4	69.858	19331			12219
13871	-34	9549	7.8	K2	17 16.591	0.06	4	70.564	-35 09 40.18	0.07	4	70.564				12220
13872	+16	2637	4.97	K0	17 22.933	0.10	7	71.257	+16 32 07.92	0.21	6	71.258	3135	19334		33135
13873	-49	8665	8.5	K0	17 25.736	0.10	4	70.912	-49 36 03.23	0.18	4	70.912				1702
13874	-37	9336	4.17	A0	14 17 30.285	0.03	52	71.404	-37 39 23.28	0.04	50	71.429	1373	19337	3251	31373
13875	-37	9337	8.6	G0	17 32.919	0.16	4	71.113	-37 59 19.45	0.21	4	71.113				12221
13876	-62	4076	8.5	K0	17 32.995	0.04	4	70.307	-63 13 51.15	0.15	4	70.307				12222
13877	-8	3757	8.4	K5	17 35.419	0.10	2	71.507	-8 27 35.77	0.13	2	71.507				12223
13878	-46	9258	8.0	K5	17 35.726	0.08	4	70.680	-46 33 20.21	0.07	4	70.680				1703

13855 A 9218AB, 11.3m, 3°7', 35°.

CATALOG OF 23,001 STARS FOR 1950.0

427

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
13879	+ 2	2803	8.5	F5	14 17 39.379	0.04	2	71.792	+ 2 10 29.05	0.05	2	71.792				12224
13880	-81	647	8.1	K0	17 44.836	0.14	4	69.753	-81 59 36.34	0.09	4	69.753				19674
13880	SP				17 44.875	0.15	4	69.821	-81 59 36.48	0.12	4	69.821				19674
13881	-31	11101	8.5	K0	17 58.543	0.07	4	69.325	-31 35 52.78	0.16	4	69.325				12225
13882p	-63	3230	7.9	G5	18 01.886	0.07	4	69.822	-64 03 23.16	0.23	4	69.822				19675
13883	-42	9253	9.0	A2	14 18 14.405	0.20	4	69.863	-43 04 21.37	0.15	4	69.863				1704
13884	-17	4069	8.9	K2	18 14.888	0.14	2	71.463	-17 33 52.91	0.16	2	71.463				12226
13885	-33	9745	8.6	K5	18 19.095	0.08	4	71.193	-34 01 31.45	0.07	4	71.193				12227
13886	-48	8973	8.5	A2	18 25.334	0.04	4	70.324	-48 50 00.70	0.19	4	70.324				1705
13887	-50	8479	8.5	K0	18 25.395	0.04	4	69.809	-50 55 26.63	0.18	4	69.809				1706
13888	- 1	2940	8.7	K0	14 18 30.469	0.13	2	70.374	- 2 16 09.36	0.08	2	70.374				12228
13889	-47	9073	8.5	G0	18 32.075	0.07	3	70.137	-47 50 37.36	0.11	3	70.137				1707
13890	-10	3880	7.5	A3	18 34.742	0.01	2	70.393	-11 10 13.27	0.09	2	70.393				12229
13891	-30	11357	9.0	K5	18 38.552	0.11	4	69.389	-30 39 23.05	0.02	4	69.389				12230
13892	-22	3773	8.9	K0	18 41.817	0.22	4	69.803	-22 36 15.64	0.05	4	69.803				12231
13893	- 3	3613	8.3	K2	14 18 42.202	0.02	2	69.874	- 4 25 51.58	0.02	2	69.874				12232
13894	-44	9259	7.67	G5	18 51.882	0.31	4	69.840	-44 25 50.73	0.11	4	69.840	19356			1708
13895	-20	4009	8.8	F0	18 55.565	0.07	4	69.878	-21 22 16.76	0.13	4	69.878				12233
13896	- 1	2942	8.8	M1	18 59.712	0.05	2	69.892	- 2 09 27.45	0.03	2	69.892				12234
13897	-10	3882	8.2	K0	19 08.259	0.01	2	69.992	-10 26 20.58	0.13	2	69.992				12235
13898	-12	4029	8.5	K2	14 19 08.728	0.34	2	70.710	-12 57 16.67	0.21	2	70.710				12236
13899	-34	9570	5.72	B8	19 19.340	0.13	6	68.700	-34 33 33.55	0.07	6	68.700	3137	19365	3256	33137
13900	-55	6001	8.17	M3	19 21.583	0.04	4	69.233	-55 44 05.57	0.07	4	69.233		19366		12237
13901	-38	9322	8.8	M0	19 21.864	0.04	4	69.737	-38 25 15.87	0.10	4	69.737				12238
13902	-20	4013	6.88	K0	19 46.484	0.10	4	69.608	-20 31 49.56	0.22	4	69.608		19373		12239
13903	-26	10252	8.09	K2	14 19 48.276	0.04	4	69.663	-26 33 34.10	0.11	4	69.663		19375		12240
13904	+ 4	2855	8.5	F5	19 54.136	0.43	2	70.954	+ 3 40 55.69	0.41	2	70.954				12241
13905	- 3	3617	8.8	A2	19 55.611	0.05	2	70.958	- 3 29 59.86	0.05	2	70.958				12242
13906	-38	9329	4.55	B5	19 56.748	0.07	6	70.748	-39 17 04.81	0.15	5	70.617		19377		21070
13907	-50	8501	6.03	K0	19 59.267	0.08	6	68.838	-50 32 43.02	0.11	6	68.838	3138	19379	3258	33138
13908	-59	5537	7.7	K2	14 20 02.126	0.12	4	69.297	-59 59 09.24	0.26	4	69.297				12243
13909	-39	8877	8.5	K2	20 03.729	0.14	4	69.762	-39 29 16.73	0.10	4	69.762				12244
13910	-51	8155	9.0	K5	20 04.480	0.08	4	69.353	-51 42 21.76	0.26	4	69.353				1709
13911	+ 4	2857	8.4	G5	20 07.719	0.31	2	70.984	+ 3 54 22.25	0.31	2	70.984				12245
13912	+ 2	2806	7.9	F2	20 11.131	0.01	2	71.451	+ 2 30 05.53	0.13	2	71.451				12246
13913	-77	953	8.2	M2	14 20 11.510	0.14	5	70.749	-78 13 54.35	0.07	4	70.625				19676
13913	SP				20 11.500	0.13	4	70.152	-78 13 54.34	0.33	4	70.152				19676
13914	+ 0	3171	6.64	A0	20 12.381	0.04	2	71.463	- 0 24 35.67	0.19	2	71.463		19388		12247
13915	- 0	2816	8.9	K5	20 14.340	0.07	2	71.946	- 1 20 40.57	0.27	2	71.946				12248
13916	-41	8724	9.0	K0	20 17.458	0.19	4	69.745	-41 26 49.63	0.15	4	69.745				1710
13917	-75	954	7.8	K2	14 20 25.836	0.24	4	70.780	-75 39 18.29	0.05	4	70.780				19677
13917	SP				20 25.796	0.31	3	70.914	-75 39 18.06	0.58	3	70.914				19677
13918	-43	9016	8.5	G0	20 26.897	0.06	4	69.652	-43 44 06.13	0.03	4	69.652				1711
13919	-25	10305	8.1	F0	20 30.603	0.11	4	69.828	-25 36 07.51	0.06	4	69.828				12249
13920	+ 4	2859	8.4	K2	20 30.805	0.10	2	71.979	+ 4 30 45.39	0.08	2	71.979				12250
13921	- 5	3868	8.0	K0	14 20 32.270	0.45	2	70.958	- 6 00 20.64	0.25	2	70.958				12251
13922	-11	3729	6.30	K0	20 43.908	0.03	43	71.995	-11 29 13.13	0.04	40	71.975	1374	19399	3260	31374
13923	-64	2832	8.1	K0	20 47.848	0.15	5	70.452	-65 15 28.29	0.14	5	70.452				19678
13924	+25	2770	6.15	F2	20 51.854	0.06	7	69.957	+25 33 51.31	0.11	6	69.740	3139	19400		33139
13925	-67	2574	5.71	A2p	20 55.543	0.03	58	71.002	-67 58 09.53	0.04	58	71.002	530	19402	3261	30530
13926	-27	9810	8.5	M1	14 20 56.805	0.11	4	69.413	-27 55 28.06	0.13	4	69.413				12252
13927	-29	11034	6.99	A2	20 59.807	0.16	4	70.371	-29 26 59.59	0.11	4	70.371		19404		12253
13928	-71	1586	8.4	K2	21 07.903	0.07	4	70.664	-72 19 26.19	0.07	4	70.664				19679
13929	-15	3862	6.69	A0	21 12.832	0.12	4	70.413	-15 52 32.45	0.19	4	70.413	3140	19408		12254
13930	+ 2	2812	8.7	G5	21 19.064	0.15	3	71.204	+ 1 57 37.13	0.06	3	71.204				12255
13931	-29	11044	8.7	K0	14 21 38.690	0.04	4	70.068	-29 58 04.48	0.17	4	70.068				12256
13932	+ 6	2875	5.08	A3	21 41.781	0.03	77	71.178	+ 6 02 45.65	0.03	74	71.133	1375	19428	3264	81375
13933	-24	11466	8.8	G0	21 45.427	0.11	4	71.291	-25 05 32.38	0.12	4	71.291				12257
13934	-11	3735	8.8	M0	21 47.342	0.01	2	70.875	-12 11 34.33	0.15	2	70.875				12258
13935	-13	3891	7.4	G5	21 52.503	0.03	2	70.909	-13 51 20.19	0.06	2	70.909				12259
13936	-24	11469	5.39	K0	14 21 56.958	0.05	21	71.279	-24 34 49.70	0.07	20	71.281	1376	19435	3265	31376
13937	- 1	2951	7.40	M0	22 00.586	0.24	2	70.997	- 2 07 02.04	0.12	2	70.997		19438		12260
13938	-62	4118	9.0	G0	22 03.523	0.12	4	70.544	-62 34 21.90	0.21	4	70.544				12261
13939	-30	11403	7.8	K0	22 05.120	0.05	4	71.251	-30 34 26.30	0.11	4	71.251				12262
13940	-64	2840	8.0	K0	22 05.321	0.11	4	70.750	-64 42 16.91	0.18	4	70.750				19680
13941	- 6	3993	8.4	K0	14 22 07.482	0.36	2	71.938	- 6 56 38.68	0.02	2	71.938				12263
13942	-19	3876	8.7	K5	22 11.664	0.12	4	71.300	-20 19 55.91	0.12	4	71.300				12264
13943	+ 0	3180	9.0	K0	22 12.016	0.20	2	72.358	+ 0 00 50.44	0.07	2	72.358				12265
13944	-56	6267	7.84	K2	22 17.452	0.12	5	71.192	-56 41 51.65	0.07	5	71.192		19441		12266
13945	-14	3951	8.8	K0	22 23.554	--	1	73.291	-14 28 58.70	--	1	73.291				12267
13946	-37	9397	8.6	K2	14 22 24.716	0.14	4	70.025	-37 22 10.57	0.16	4	70.025				12268
13947	-32	10097	7.58	K0	22 31.854	0.17	4	70.126	-32 44 48.73	0.12	4	70.126		19443		12269
13948	-66	2533	8.1	K0	22 40.704	0.07	5	71.334	-67 11 17.67	0.28	4	71.133				19681
13949	-36	9344	9.6	G0	22 41.325	0.11	4	70.182	-36 39 15.40	0.11	4	70.182				12270
13950	-19	3880	6.43	A0	22 41.943	0.50	2	71.817	-19 44 40.96	0.09	2	71.817		19449		12271

13882 11.0m, 2"0, 104°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
13951	-23	11698	8.5	F0	14 22 46.944	0.13	4	70.620	-23 45 24.97	0.04	4	70.620				12272
13952	-65	2731	8.5	K0	22 49.112	0.15	5	71.313	-66 16 33.80	0.04	4	71.097				19682
13953	-41	8753	9.1	K0	22 50.306	0.11	3	70.241	-42 02 58.80	0.20	3	70.241				1712
13954	-30	11410	8.6	K5	22 51.268	0.06	4	70.874	-31 16 27.41	0.10	4	70.874				12273
13955	-54	6003	7.8	K5	22 51.899	0.16	4	70.896	-55 02 03.62	0.14	4	70.896				12274
13956	-44	9322	4.65	B3	14 22 54.935	0.05	31	71.000	-44 59 47.21	0.06	31	71.000	1377	19453	3269	31377
13957	-34	9618	9.1	K0	22 56.608	0.09	4	70.761	-34 27 01.84	0.15	4	70.761				12275
13958	-20	4023	7.7	K0	22 56.966	0.07	5	71.555	-21 12 21.80	0.22	4	71.410				12276
13959	-42	9320	9.5	K5	23 03.167	0.09	4	71.230	-43 10 58.74	0.09	4	71.230				1713
13960	-65	2732	5.76	K5	23 05.763	0.09	7	70.540	-65 35 49.33	0.10	7	70.540	3141	19456	3270	33141
13961	-60	5366	7.8	K0	14 23 10.266	0.11	4	70.400	-60 31 43.03	0.16	4	70.400				12277
13962	-15	3869	8.6	K2	23 11.959	0.08	2	72.795	-16 04 28.47	0.39	2	72.795				12278
13963	-40	8674	8.5	M0	23 12.196	0.06	5	71.381	-40 34 22.13	0.11	4	71.189				1714
13964	-35	9510	9.0	K2	23 12.512	0.25	3	70.613	-35 32 04.16	0.12	3	70.613				12279
13965	-38	9372	8.2	K2	23 17.205	0.10	5	71.271	-38 23 25.21	0.13	5	71.271				12280
13966	-3	3625	8.0	A3	14 23 21.597	0.07	2	73.303	-3 29 17.99	0.30	2	73.303				12281
13967	+1	2927	7.01	A2	23 22.917	0.01	2	72.401	+1 13 03.98	0.72	2	72.401	19462			12282
13968	-0	2821	8.5	F2	23 28.964	0.01	2	72.368	-0 28 01.32	0.40	2	72.368				12283
13969	-3	3626	8.4	K0	23 30.069	0.14	2	73.291	-4 13 48.78	0.24	2	73.291				12284
13970	-18	3819	8.9	K0	23 36.337	0.25	2	73.325	-19 23 18.87	0.31	2	73.325				12285
13971	-26	10290	8.12	K2	14 23 44.870	0.11	4	70.232	-26 37 58.24	0.08	4	70.232		19474		12286
13972	-18	3821	8.8	K0	23 47.917	0.38	2	70.434	-18 35 44.38	0.08	2	70.434				12287
13973	-0	2823	8.7	G5	24 03.224	0.19	2	71.317	-0 51 42.70	0.05	2	71.317		19479		12288
13974	-51	8203	8.6	F2	24 05.214	0.08	4	69.882	-52 18 03.43	0.08	4	69.882				12289
13975	+19	2810	5.36	A5	24 07.625	0.04	26	71.036	+19 27 03.31	0.07	26	71.036	1378	19480	3274	81378
13976	-16	3867	8.2	K5	14 24 12.395	0.01	2	71.739	-17 25 40.00	0.11	2	71.739				12290
13977	-47	9142	7.5	K0	24 12.747	0.25	3	69.793	-48 09 35.00	0.22	2	69.988				1715
13978	-57	6649	8.8	B9	24 14.913	0.11	4	71.189	-58 12 25.59	0.21	4	71.189				12291
13979	-71	1591	7.6	K2	24 16.418	0.11	4	70.430	-71 22 00.46	0.15	4	70.430				19683
13980	-54	6016	8.5	M0	24 26.709	0.23	4	70.785	-54 47 59.60	0.11	4	70.785				12292
13981	-34	9638	6.86	F8	14 24 29.411	0.13	5	71.440	-35 13 23.08	0.19	4	71.260		19488		12293
13982	-59	5587	8.9	G5	24 31.883	0.14	4	71.344	-59 54 19.75	0.24	4	71.344				12294
13983	-14	3959	7.26	F5	24 37.460	0.15	2	73.310	-14 36 52.11	0.24	2	73.310		19490	3275	12295
13984	-15	3875	8.5	K0	24 40.497	0.35	2	73.348	-15 35 22.21	0.08	2	73.348				12296
13985	-32	10128	9.2	K2	24 42.473	0.16	4	71.160	-33 06 24.91	0.21	4	71.160				12297
13986	-9	3943	8.6	K2	14 24 49.463	0.13	2	73.377	-9 58 52.05	0.44	2	73.377				12298
13987	-35	9536	8.6	K2	24 49.750	0.05	4	70.801	-36 13 43.92	0.09	4	70.801				12299
13988	-45	9197	8.0	K0	24 53.222	0.08	5	71.017	-46 06 10.98	0.28	4	70.731				1716
13989	-12	4055	6.69	F5	25 02.253	0.37	2	72.445	-13 08 08.44	0.32	2	72.445		19494		12300
13990	-63	3264	8.7	K2	25 03.791	0.19	4	69.959	-63 53 41.07	0.21	4	69.959				12301
13991	-10	3904	8.3	F0	14 25 05.792	0.21	2	72.928	-11 06 15.15	0.11	2	72.928				12302
13992	+0	3185	8.9	F8	25 12.655	0.08	2	72.396	+0 19 58.50	0.22	2	72.396				12303
13993	-37	9433	8.7	G5	25 12.947	0.19	4	70.058	-37 32 16.95	0.33	4	70.058				12304
13994*	-28	10712	5.00	B8	25 14.232	0.06	21	70.282	-29 16 05.29	0.05	21	70.282	532	19499	3277	30532
13995	-38	9396	7.9	M0	25 18.507	0.10	4	70.070	-39 19 05.07	0.08	4	70.070				12305
13996	+3	2893	9.0	K2	14 25 20.689	0.07	2	73.316	+2 37 09.68	0.23	2	73.316				12306
13997	-1	2956	8.6	F8	25 24.680	0.12	2	73.291	-1 32 43.80	0.04	2	73.291				12307
13998	+4	2866	8.8	K0	25 27.424	0.03	2	71.399	+4 27 09.62	0.20	2	71.399				12308
13999	-2	3849	7.50	A0	25 28.957	0.04	2	72.718	-2 46 50.77	0.12	2	72.718		19502		12309
14000	-19	3888	8.0	A0	25 29.337	0.00	4	70.579	-20 20 28.62	0.08	4	70.579				12310
14001	-8	3781	8.7	K5	14 25 30.257	0.27	2	72.507	-8 32 01.13	0.48	2	72.507				12311
14002p	-1	2957	4.99	K0	25 37.157	0.05	14	71.618	-2 00 17.41	0.09	13	71.646	533	19504	3278	30533
14003	-23	11731	9.48	K5	25 37.962	0.11	4	71.307	-24 11 52.21	0.06	4	71.307		19506		12312
14004	-27	9857	8.3	K2	25 39.636	0.08	4	70.848	-27 41 47.78	0.03	4	70.848				12313
14005	-21	3912	8.5	K2	25 43.646	0.15	4	71.054	-21 46 15.97	0.15	4	71.054				12314
14006	-44	9365	8.16	K5	14 25 48.406	0.15	4	70.239	-44 55 28.26	0.07	4	70.239		19507		1717
14007	+3	2896	7.10	F8	25 59.744	0.37	2	71.776	+3 00 40.83	0.64	2	71.776		19514		12315
14008	-49	8777	7.28	K2	26 01.769	0.17	3	70.695	-49 53 10.21	0.10	3	70.695		19515		1718
14009	-6	4009	5.74	K5	26 03.213	0.06	6	69.744	-6 40 38.25	0.13	6	69.744	3143	19516		33143
14010	-60	5391	8.1	K2	26 05.129	0.10	4	69.872	-60 56 50.25	0.10	4	69.872				12316
14011	-13	3907	8.9	K5	14 26 12.688	0.20	2	70.768	-13 32 34.55	0.04	2	70.768				12317
14012	+2	2826	8.1	A0	26 20.418	0.10	2	71.905	+1 51 20.03	0.16	2	71.905				12318
14013	-50	8574	9.2	K5	26 21.018	0.07	5	71.075	-50 29 20.60	0.15	5	71.075				1719
14014	-46	9351	8.65	G5	26 21.222	0.03	4	70.212	-47 00 18.22	0.09	4	70.212		19523		1720
14015	+1	2939	8.3	K0	26 24.441	0.17	4	72.073	+1 16 43.04	0.33	3	72.044				12319
14016	+4	2871	7.04	K5	14 26 25.377	0.04	2	69.713	+3 56 31.36	0.09	2	69.713		19526		12320
14017	-53	5994	8.9	K0	26 27.569	0.13	4	69.857	-53 22 20.59	0.12	4	69.857				12321
14018	-4	3696	8.0	F5	26 32.547	0.26	2	70.415	-4 42 49.12	0.21	2	70.415				12322
14019	-51	8232	9.0	G5	26 33.748	0.18	4	70.311	-51 38 31.20	0.36	4	70.311				1721
14020	-41	8815	8.7	K0	26 40.678	0.14	4	69.838	-42 20 02.66	0.08	4	69.838				1722
14021	-48	9094	9.0	K0	14 26 41.094	0.13	4	70.536	-48 47 35.21	0.28	4	70.536				1723
14022	-73	1295	7.5	K2	26 41.447	0.23	4	68.729	-74 10 11.87	0.17	4	68.729				19684
14023	-34	9665	8.9	K2	26 43.429	0.05	4	69.908	-34 32 47.92	0.06	4	69.908				12323
14024	-78	867	8.8	K5	26 46.135	0.25	4	70.312	-79 15 32.79	0.25	4	70.312				19685
14024 SP					26 46.088	0.09	4	69.260	-79 15 33.10	0.42	4	69.260				19685

13994 A 9270, 5.8m-5.8m, 0°1:
9.4m, 4°2, 280°.

14002 A 9273, 9.5m, 4°8, 110°.

CATALOG OF 23,001 STARS FOR 1950.0

429

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
14025	-9	3949	8.0	K0	14 26 50.154	0.30	2	71.447	-10 20' 40.17	0.01	2	71.447				12324
14026	-44	9383	5.49	B9	26 54.324	0.10	8	71.812	-45 05 57.33	0.24	6	71.698		19533		21071
14027	-24	11523	7.67	K0	26 56.995	0.15	4	70.182	-25 19 13.72	0.05	4	70.182		19535		12325
14028	-42	9378	9.5	G5	26 58.440	0.19	4	70.577	-43 19 29.43	0.17	4	70.577				1724
14029	-5	3892	8.2	K2	27 04.451	0.14	2	70.404	-5 45 39.62	0.59	2	70.404				12326
14030	-34	9672	9.0	G5	14 27 13.371	0.35	4	70.108	-35 18 45.03	0.23	4	70.108				12327
14031	-33	9839	7.7	K0	27 14.810	0.08	4	70.069	-33 23 49.58	0.06	3	70.291				12328
14032	+1	2941	5.80	A3	27 17.382	0.12	6	69.402	+1 03 02.74	0.13	6	69.402	3145	19542		33145
14033	-84	466	8.6	G0	27 26.506	0.14	4	70.277	-85 04 28.82	0.14	4	70.277				19686
14033	SP				27 26.769	0.06	4	70.271	-85 04 28.33	0.21	4	70.271				19686
14034	-45	9220	8.7	K0	14 27 29.274	0.07	5	70.586	-45 38 12.34	0.09	4	70.197				1725
14035	-14	3968	7.4	F5	27 29.354	0.24	2	70.527	-15 01 37.96	0.19	2	70.527				12329
14036	-6	4012	8.3	K0	27 29.583	0.04	4	71.877	-6 50 59.04	0.08	3	72.087			3284	12330
14037	-28	10740	7.82	K2	27 40.165	0.13	4	69.814	-29 05 18.43	0.13	4	69.814		19551		12331
14038	-39	8968	8.2	G5	27 45.819	0.13	4	69.764	-39 47 03.17	0.21	4	69.764				12332
14039	-21	3917	6.89	B8	14 27 50.061	0.07	6	69.819	-22 14 22.07	0.12	6	69.819		19557		12333
14040	-26	10334	7.82	A3	27 50.566	0.05	4	69.442	-26 36 51.91	0.10	4	69.442		19558		12334
14041	-3	3636	7.30	F5	27 54.037	0.37	2	69.868	-3 50 37.66	0.23	2	69.868		19559		12335
14042	-76	831	8.7	G5	28 03.245	0.07	5	70.382	-77 13 27.50	0.12	4	70.362				19687
14042	SP				28 03.281	0.17	4	70.148	-77 13 27.85	0.24	4	70.148				19687
14043	-38	9430	6.02	K0	14 28 04.462	0.08	5	69.094	-38 38 55.50	0.09	6	69.145	3148	19565	3287	33148
14044	-2	3855	8.1	K0	28 06.506	0.25	2	70.910	-2 53 17.47	0.02	2	70.910		19567		12336
14045	+5	2886	6.13	K2	28 15.073	0.10	6	69.061	+4 59 36.99	0.14	6	69.061	3149	19572		33149
14046	-34	9699	8.8	F2	28 28.400	0.10	4	69.779	-35 07 54.12	0.15	4	69.779				18455
14047	-22	3802	9.0	A0	28 31.742	0.13	4	70.004	-22 51 43.66	0.08	4	70.004				12337
14048	-11	3753	8.5	K0	14 28 36.381	0.25	2	69.805	-11 38 57.07	0.51	2	69.805		19579		12338
14049	+0	3196	9.0	G	28 37.711	0.14	2	70.404	-0 00 58.76	0.13	2	70.404				12339
14050	-53	6007	9.1	K0	28 40.688	0.10	4	68.826	-54 17 21.94	0.08	4	68.826				12340
14051	-31	11259	8.9	K0	28 40.904	0.19	4	69.679	-31 47 58.47	0.13	4	69.679				12341
14052	-48	9115	7.5	G5	28 41.572	0.06	4	69.853	-48 37 42.11	0.04	4	69.853				1726
14053	-38	9442	7.9	M1	14 28 41.933	0.10	4	69.776	-38 20 14.80	0.09	4	69.776				12342
14054	-50	8610	7.5	K0	28 52.588	0.08	4	68.836	-51 07 05.25	0.08	4	68.836				1727
14055*	-31	11262	8.9	K0	28 54.348	0.11	4	70.292	-32 13 55.89	0.24	4	70.292				12343
14056	-12	4074	7.9	G5	29 03.748	0.04	2	69.853	-12 58 17.00	0.28	2	69.853			3288	12344
14057	-47	9205	8.5	G5	29 05.000	0.09	7	70.929	-47 31 52.87	0.16	5	71.044				1728
14058	-15	3892	7.82	K0	14 29 11.741	0.06	2	71.387	-16 08 30.95	0.19	2	71.387		19588		12345
14059	-20	4047	7.9	K0	29 12.840	0.11	4	69.819	-20 43 37.94	0.15	4	69.819				12346
14060	-4	3701	8.9	K6	29 14.832	0.25	2	69.878	-4 32 37.56	0.02	2	69.878				12347
14061	-22	3803	6.95	F0	29 16.390	0.08	4	69.500	-23 13 34.04	0.11	4	69.500		19591		12348
14062	-1	2963	7.8	G5	29 28.229	0.03	2	71.425	-1 34 07.79	0.13	2	71.425				12349
14063	-40	8756	9.5	F5	14 29 28.893	0.20	5	71.047	-41 19 20.74	0.18	4	70.770				1729
14064	-10	3920	8.7	G5	29 30.337	0.23	3	71.437	-10 42 54.72	0.21	2	71.463				12350
14065	-56	6303	9.2	F0	29 31.103	0.16	4	69.330	-57 02 41.88	0.07	4	69.330				12351
14066	-44	9421	8.48	M0	29 31.749	0.07	4	69.860	-44 53 10.06	0.10	4	69.860		19594		1730
14067	-17	4110	8.7	A0	29 34.961	0.14	2	71.455	-17 39 39.47	0.47	3	71.433				12352
14068	-29	11140	9.1	K2	14 29 42.152	0.11	4	70.333	-30 06 40.04	0.09	4	70.333				12353
14069	+4	2878	7.40	M0	29 42.277	0.14	2	69.839	+4 21 44.85	0.10	2	69.839		19598		12354
14070	-55	6046	7.7	K0	29 43.944	0.09	4	69.351	-55 59 46.34	0.19	4	69.351				12355
14071	-18	3846	8.6	K0	29 44.921	0.09	2	71.314	-18 36 09.75	0.53	2	71.314				12356
14072	-49	8836	8.5	G5	30 01.889	0.20	4	70.241	-49 40 09.17	0.13	4	70.241				1731
14073	-55	6048	7.8	K5	14 30 07.696	0.14	5	70.140	-55 44 29.54	0.14	5	70.140				12357
14074	-36	9442	8.0	K0	30 14.753	0.03	5	70.973	-37 01 18.89	0.13	4	70.682				12358
14075	+22	2715	5.96	F0	30 15.924	0.08	6	70.404	+22 28 46.06	0.10	6	70.404	3151	19611	3292	33151
14076	-30	11522	8.8	K2	30 21.748	0.09	4	70.238	-30 45 11.35	0.07	4	70.238				12359
14077	-40	8767	8.5	F0	30 31.581	0.18	4	70.748	-40 30 31.93	0.17	4	70.748				1732
14078	-73	1302	6.73	K5	14 30 35.330	0.12	6	69.831	-73 28 32.00	0.13	6	69.831	3152	19619		33152
14078	SP				30 35.298	0.09	21	71.532	-73 28 31.89	0.21	21	71.532	3152	19619		53152
14079	-35	9616	9.0	K2	30 38.764	0.12	4	70.618	-36 03 00.10	0.14	4	70.618				12360
14080	-39	9004	8.9	M0	30 39.512	0.12	4	70.863	-39 48 08.51	0.16	4	70.863				12361
14081	-6	4025	7.9	K0	30 42.496	0.23	2	69.907	-6 42 59.64	0.16	2	69.907		19621		12362
14082	-35	9618	9.2	K2	14 30 43.162	0.09	4	70.642	-35 39 19.56	0.06	4	70.642				12363
14083	-14	3978	9.0	K2	30 44.037	0.02	2	70.415	-14 47 06.99	0.06	2	70.415				12364
14084	-45	9264	8.85	K0	30 44.725	0.15	4	70.597	-46 12 53.07	0.13	4	70.597		19622		1733
14085	-84	470	9.1	K0	30 46.465	0.14	5	70.351	-84 21 17.46	0.05	4	70.322				19688
14085	SP				30 46.342	0.15	4	69.853	-84 21 17.48	0.24	4	69.853				19688
14086	-61	4610	7.9	K	14 30 49.576	0.17	4	69.333	-61 31 45.78	0.08	4	69.333				12365
14087	-13	3923	8.9	A2	30 50.184	0.02	2	70.422	-13 51 25.84	0.11	2	70.422				12366
14088	-23	11795	8.90	K0	30 54.981	0.09	4	69.695	-24 07 37.98	0.07	4	69.695		19625		12367
14089	-68	2133	8.6	F5	31 02.577	0.19	3	69.557	-68 27 56.76	0.09	3	69.557				19689
14090	-29	11150	8.3	F5	31 03.329	0.10	5	70.335	-29 27 07.31	0.07	4	69.885				12368
14091	-31	11296	7.69	K0	14 31 05.841	0.14	4	70.155	-31 44 18.01	0.18	4	70.155		19631		12369
14092	-43	9157	8.5	F5	31 08.072	0.21	5	70.327	-44 04 59.43	0.13	4	70.293				1734
14093	-16	3892	8.1	A0	31 17.609	0.23	4	70.404	-16 36 02.40	0.16	2	70.404				12370
14094	-64	2923	8.8	G5	31 17.922	0.12	4	69.809	-64 39 56.87	0.19	4	69.809				19690
14095	-18	3853	8.4	K0	31 21.424	0.30	2	70.765	-19 18 01.67	0.53	2	70.765				12371

14053 SDS, 9.5m-9.9m, 0°7', 112°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
14096	-69	2068	7.1	M1	14	31	27.942	0.04	4	69.855	-69 45 08.31	0.11	4	69.855					19691
14097	-52	7318	8.6	K0		31	29.680	0.12	4	69.854	-52 58 56.84	0.11	4	69.854					12372
14098	+2	2836	8.2	K0		31	46.387	0.09	2	69.706	+1 53 48.44	0.03	2	69.706					12373
14099	-80	720	8.3	K2		31	47.708	0.04	4	69.323	-80 31 09.15	0.12	4	69.323					19692
14099 SP						31	47.351	0.86	4	69.756	-80 31 09.41	0.18	4	69.756					19692
14100	-33	9903	9.2	K0	14	31	53.959	0.02	5	71.003	-33 42 52.73	0.11	4	70.714					12374
14101	-66	2571	8.6	K0		31	57.459	0.11	4	69.907	-66 48 00.38	0.06	4	69.907					19693
14102	-25	10417	8.6	K2		32	01.253	0.12	4	69.414	-25 50 14.16	0.08	4	69.414					12375
14103	-19	3903	6.48	A0		32	01.562	0.14	4	69.362	-20 13 15.87	0.17	4	69.362		19649			12376
14104	-10	3927	8.8	F5		32	02.977	0.01	2	70.855	-10 39 28.78	0.00	2	70.855					12377
14105	-70	1779	8.9	K0	14	32	06.852	0.09	4	68.943	-70 51 55.12	0.17	4	68.943					19694
14106	-37	9531	8.2	K2		32	11.540	0.03	4	70.197	-38 17 14.13	0.08	3	70.462					12378
14107	-0	2845	8.7	F8		32	13.418	0.04	2	71.474	-1 11 38.90	0.14	2	71.474					12379
14108	-51	8302	7.8	K2		32	14.049	0.15	4	70.044	-52 15 19.56	0.11	4	70.044					12380
14109	-41	8917	2.65	*		32	19.229	0.03	69	71.410	-41 56 22.58	0.04	66	71.375	537	19656	3301		30537
14110	-8	3798	8.4	K2	14	32	26.585	0.34	2	71.757	-9 05 24.83	0.46	2	71.757					12381
14111	-31	11310	9.1	G0		32	30.175	0.16	4	70.843	-32 13 15.81	0.04	4	70.843					12382
14112	+30	2536	4.48	F0		32	30.442	0.03	77	71.380	+29 57 43.78	0.06	75	71.371	1380	19659	3303		81380
14113	+4	2882	8.5	G5		32	30.697	0.07	2	71.792	+4 29 13.83	0.10	2	71.792					12383
14114	-27	9928	8.0	K5		32	38.325	0.11	4	69.304	-27 48 23.93	0.11	4	69.304					12384
14115	-7	3871	8.5	G5	14	32	45.724	0.02	2	71.822	-8 08 27.78	0.23	2	71.822					12385
14116	-5	3909	7.5	F5		32	49.230	0.21	2	71.804	-5 36 54.07	0.08	2	71.804					12386
14117	-64	2934	8.6	K0		32	50.695	0.10	4	69.365	-65 14 35.94	0.19	4	69.365					19695
14118	-51	8310	9.0	K0		32	59.081	0.14	3	69.701	-51 39 25.81	0.06	3	69.701					1735
14119	-58	5621	8.0	K2		33	02.188	0.12	4	69.802	-59 11 46.17	0.20	4	69.802					12387
14120	-34	9774	7.66	M0	14	33	03.883	0.17	4	69.825	-34 41 19.20	0.07	4	69.825		19670			12388
14121	+4	2885	7.6	F2		33	04.982	0.17	2	71.832	+3 41 06.77	0.03	2	71.832		19671			12389
14122	-4	3715	7.3	K0		33	06.223	0.02	3	72.298	-5 02 55.32	0.15	2	72.379					12390
14123p	-61	4636	7.7	K0		33	09.196	0.05	4	69.766	-62 17 29.71	0.16	4	69.766					12391
14124	+2	2837	8.2	K5		33	14.641	0.09	2	70.783	+2 27 40.40	0.15	2	70.783					12392
14125	-36	9486	8.9	K5	14	33	19.219	0.20	4	70.518	-37 05 06.92	0.22	4	70.518					12393
14126	+0	3207	8.04	G5		33	25.598	0.14	2	70.376	+0 26 13.24	0.09	2	70.376		19677			12394
14127	-67	2616	6.09	F5		33	31.384	0.09	6	69.207	-67 42 46.60	0.11	6	69.207	3156	19678			33156
14128	-3	3645	8.7	K2		33	34.069	0.16	2	70.777	-3 33 49.90	0.23	2	70.777		19680			12395
14129	-13	3931	8.7	K5		33	35.228	0.32	2	70.867	-13 48 38.68	0.03	2	70.867					12396
14130	-57	6713	8.2	K2	14	33	41.308	0.10	4	69.351	-57 59 55.68	0.13	4	69.351					12397
14131	-4	3718	8.4	K5		33	43.831	0.10	2	70.784	-4 52 44.90	0.43	2	70.784					12398
14132	-46	9446	9.0	K0		33	44.808	0.08	4	70.271	-46 53 49.49	0.13	4	70.271					1736
14133	+23	2710	6.48	K0		33	51.175	0.15	7	70.392	+23 28 02.06	0.09	7	70.392	3157	19687	3307		33157
14134	-11	3766	8.7	A3		33	54.314	0.23	2	72.510	-12 16 36.33	0.08	2	72.510					12399
14135	-25	10441	8.0	K0	14	34	10.954	0.12	4	69.349	-25 35 05.35	0.16	4	69.349					12400
14136	-21	3935	8.2	F0		34	11.948	0.13	4	69.346	-21 55 22.88	0.09	4	69.346					12401
14137	+3	2909	8.6	K5		34	13.307	0.00	2	71.480	+3 03 20.94	0.16	2	71.480					12402
14138	-40	8818	8.5	K0		34	13.727	0.09	4	69.785	-40 34 22.18	0.08	3	69.912					1737
14139	-11	3770	6.24	F8		34	18.594	0.02	129	72.090	-12 05 29.66	0.03	125	72.102	1381	19695	3308		31381
14140	-59	5665	8.3	K0	14	34	20.954	0.21	4	69.298	-59 55 39.61	0.15	4	69.298					12403
14141	-48	9198	4.14	B5		34	30.556	0.04	6	68.709	-49 12 33.84	0.04	6	68.709	3158	19698			33158
14142	-3	3649	7.05	G0		34	32.038	0.04	2	71.365	-3 40 31.72	0.02	2	71.365		19699			12404
14143	+0	3211	8.9	F8		34	50.430	0.01	2	70.859	-0 16 16.09	0.05	2	70.859					12405
14144	-49	8905	8.6	K5		34	55.263	0.11	4	69.707	-49 50 19.12	0.16	4	69.707					1738
14145	-22	3819	7.68	K5	14	35	07.949	0.13	4	69.347	-22 56 53.97	0.05	4	69.347		19709			12406
14146	-58	5640	8.7	F2		35	10.256	0.14	4	69.867	-58 56 43.96	0.14	4	69.867					12407
14147	-47	9289	8.9	K5		35	11.889	0.11	4	69.746	-48 10 50.26	0.04	4	69.746					1739
14148	-67	2622	6.97	B3		35	12.555	0.11	6	71.681	-67 59 16.69	0.07	6	71.681		19711			21072
14149	-9	3972	7.8	K2		35	23.382	0.02	2	70.366	-9 31 19.29	0.15	2	70.366					12408
14150	-12	4104	7.40	G0	14	35	24.126	0.02	2	70.387	-12 41 39.86	0.20	2	70.387		19717			12409
14151	-55	6092	7.53	K0		35	27.366	0.14	4	69.738	-56 16 56.81	0.13	4	69.738		19719			12410
14152	-53	6043	8.4	A2		35	32.152	0.07	4	69.827	-54 07 46.08	0.10	4	69.827					12411
14153	-42	9514	6.72	G5		35	35.518	0.19	4	69.772	-42 47 07.02	0.11	4	69.772		19721			1740
14154	-63	3349	7.88	K0		35	40.342	0.08	4	69.873	-63 19 49.49	0.11	4	69.873		19722			12412
14155	-35	9683	7.33	F5	14	35	52.047	0.18	4	69.788	-35 23 00.89	0.10	4	69.788		19723			12413
14156	+18	2906	5.98	K0		35	54.344	0.12	6	68.909	+18 30 52.02	0.14	6	68.909	3160	19726			33160
14157	-2	3874	8.0	K0		35	54.913	0.09	2	70.366	-2 55 41.27	0.02	2	70.366					12414
14158	-52	7388	8.0	K0		35	56.336	0.12	4	69.948	-52 32 09.40	0.34	4	69.948					12415
14159	-19	3920	8.7	A5		35	57.809	0.19	2	71.387	-19 43 34.24	0.09	2	71.387					12416
14160*	-60	5483	0.33	*	14	36	01.124	0.02	124	71.131	-60 37 26.12	0.03	120	71.119	538	19728			30538
14161	-35	9686	8.0	K2		36	11.662	0.10	4	69.797	-36 00 56.67	0.13	4	69.797					12417
14162	-45	9327	8.21	K0		36	18.543	0.13	4	69.838	-46 05 03.81	0.04	4	69.838		19731			1741
14163	-71	1607	8.9	K2		36	18.637	0.06	4	70.420	-72 06 17.92	0.11	4	70.420					19696
14164	-9	3975	6.78	G5		36	18.845	0.16	2	71.414	-10 20 23.61	0.18	2	71.414		19732			12418
14165	-5	3916	7.75	K0	14	36	22.091	0.19	2	70.403	-5 34 18.72	0.08	2	70.403		19735			12419
14166	-39	9092	7.59	K0		36	28.041	0.20	3	69.625	-39 20 59.34	0.09	2	69.736		19737			12420
14167	-31	11367	9.0	M1		36	28.423	0.11	4	69.401	-31 26 42.42	0.07	4	69.401					12422
14168	-24	11606	8.09	K0</															

CATALOG OF 23,001 STARS FOR 1950.0

431

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
14170	-51	8360	7.5	K0	14 36 34.082	0.15	5	71.078	-51 51 02.89	0.16	5	71.078				1742
14171	-17	4138	8.8	F8	36 35.765	0.24	2	70.404	-17 40 22.45	0.26	2	70.404				12424
14172	-42	9533	8.5	K0	36 44.075	0.09	5	71.002	-43 13 53.22	0.03	4	70.717				1743
14173	-15	3920	8.6	K0	36 53.360	0.51	2	71.486	-16 22 30.46	0.03	2	71.486				12425
14174	+ 0	3216	8.8	G0	36 54.561	0.15	3	71.231	- 0 02 02.50	0.27	2	71.224				12426
14175	-55	6107	6.28	K0	14 36 54.957	0.08	6	69.171	-56 13 35.02	0.17	6	69.171	3162	19745		33162
14176	-35	9697	8.3	K0	36 59.885	0.19	4	70.343	-35 30 33.39	0.08	4	70.343				12427
14177*	-21	3942	8.8	A0	37 00.968	0.11	4	69.370	-21 27 29.68	0.15	4	69.370				12428
14178	-50	8727	8.5	K0	37 04.142	0.12	5	70.766	-50 31 55.72	0.08	4	70.423				1744
14179	-37	9595	9.1	K0	37 08.701	0.10	4	70.619	-38 00 38.51	0.12	4	70.619				12429
14180	-23	11852	8.89	K0	14 37 09.653	0.22	4	70.296	-23 53 20.20	0.15	4	70.296		19751		12430
14181	-16	3914	8.8	K2	37 12.759	0.12	2	71.500	-17 14 09.37	0.00	2	71.500				12431
14182	-14	4003	9.0	F5	37 24.550	0.06	2	72.044	-15 03 15.68	0.02	2	72.044				12432
14183	- 6	4048	8.1	K2	37 25.646	0.10	2	70.404	- 6 43 37.07	0.05	2	70.404				12433
14184	-29	11226	7.8	K2	37 26.034	0.14	4	69.414	-30 19 20.04	0.12	4	69.414				12434
14185	-41	9021	7.3	M0	14 37 29.825	0.07	4	70.522	-41 59 53.94	0.14	4	70.522				1745
14186	-75	997	7.4	K0	37 29.843	0.10	4	70.278	-75 36 40.40	0.16	4	70.278				19697
14186 SP					37 29.790	0.21	4	70.790	-75 36 39.82	0.25	3	70.784				19697
14187	-25	10479	8.4	A5	37 35.259	0.08	4	69.630	-26 02 01.53	0.13	4	69.630				12435
14188	-43	9233	9.2	K0	37 37.683	0.10	4	70.298	-44 17 13.43	0.11	4	70.298				1746
14189	-13	3944	7.16	K5	14 37 47.750	0.03	2	70.417	-13 49 58.01	0.37	2	70.417		19756		12436
14190	-31	11381	8.0	K0	37 51.353	0.08	4	70.603	-32 06 40.75	0.08	4	70.603				12437
14191	-76	856	8.8	G0	37 54.986	0.14	4	69.934	-76 50 15.25	0.12	4	69.934				19699
14191 SP					37 54.971	0.30	4	70.257	-76 50 15.92	0.37	4	70.257				19699
14192	-73	1334	8.6	F5	37 55.186	0.15	4	70.206	-73 54 23.15	0.10	4	70.206				19698
14193	-14	4006	8.9	K0	14 38 08.723	0.31	2	70.746	-15 06 23.23	0.37	2	70.746				12438
14194	-18	3875	8.9	G0	38 09.294	0.50	2	71.425	-18 35 04.53	0.06	2	71.425				12439
14195	- 7	3884	8.8	F2	38 10.537	0.19	3	71.523	- 7 41 05.67	0.03	3	71.523				12440
14196	-34	9840	8.7	K0	38 13.773	0.14	3	70.229	-34 23 58.21	0.24	3	70.229				12441
14197p	-33	9994	8.4	K0	38 21.591	0.18	4	69.830	-33 44 12.63	0.06	4	69.830				12442
14198	- 2	3882	8.2	G5	14 38 23.504	0.16	2	71.489	- 2 37 54.80	0.11	2	71.489				12443
14199	-68	2153	8.6	K0	38 23.782	0.18	4	68.879	-68 43 08.46	0.15	4	68.879				19700
14200	-64	2977	3.42	F0	38 25.719	0.04	44	71.159	-64 45 37.18	0.04	44	71.159	539	19772	3315	30539
14201	-13	3947	8.9	G5	38 34.700	0.05	3	71.925	-13 42 54.94	0.06	2	71.807				12444
14202	-46	9501	2.89	B2	38 35.456	0.03	94	71.336	-47 10 29.69	0.03	91	71.362	541	19774	3316	30541
14203	+ 4	2899	8.4	G0	14 38 47.728	0.16	3	71.614	+ 3 39 43.41	0.37	2	71.332				12445
14204	-12	4114	8.6	G0	38 48.894	0.07	2	72.286	-12 30 25.43	0.08	2	72.286				12446
14205	-37	9618	4.09	B3	38 50.622	0.10	7	71.594	-37 34 48.97	0.09	6	71.500		19779		21073
14206	+ 0	3223	8.0	K0	38 53.046	0.02	2	69.750	+ 0 19 00.56	0.17	2	69.750				12447
14207	-74	1226	8.5	F8	38 54.486	0.13	4	68.896	-74 46 32.88	0.17	4	68.896				19701
14208	- 9	3979	8.6	F8	14 39 00.288	0.05	2	72.055	- 9 35 47.52	0.09	2	72.055				12448
14209	- 0	2855	7.8	K5	39 01.155	0.08	2	71.500	- 1 10 31.20	0.10	2	71.500				12449
14210	-28	10884	8.21	A0	39 02.979	0.19	4	69.849	-28 36 18.98	0.09	4	69.849		19786		12450
14211	-28	10887	8.7	K0	39 08.891	0.13	5	71.198	-28 41 51.73	0.27	5	71.198				12451
14212	+ 8	2903	5.03	G5	39 11.247	0.04	6	70.161	+ 8 22 28.62	0.10	6	70.161	3163	19789		33163
14213	-32	10306	6.78	G5	14 39 11.997	0.14	6	70.167	-32 33 23.39	0.12	6	70.167	3164	19790	3320	33164
14214	+ 1	2964	8.4	G5	39 12.099	0.02	2	71.807	+ 0 36 21.01	0.02	2	71.807				12452
14215	+12	2729	5.63	G5	39 19.047	0.21	2	70.312	+11 52 27.70	0.18	2	70.312	1382	19793	3322	31382
14216	-48	9261	8.5	G0	39 19.161	0.12	4	70.178	-49 02 14.70	0.16	4	70.178				1747
14217	-11	3789	7.10	K0	39 19.206	0.11	3	71.588	-12 01 19.65	0.04	3	71.588		19792	3321	12453
14218	-38	9585	10.3	A2	14 39 24.494	0.08	3	72.231	-38 44 23.96	0.16	3	72.231				12454
14219	+ 2	2853	8.1	K0	39 25.050	0.00	2	72.345	+ 1 50 18.84	0.28	2	72.345				12455
14220	-27	9991	7.78	K5	39 29.469	0.10	4	69.885	-27 34 28.72	0.09	4	69.885		19795		12456
14221	-20	4074	8.6	F0	39 44.439	0.13	4	69.891	-20 58 53.40	0.16	4	69.891				12457
14222	- 4	3736	8.0	K0	39 48.015	0.12	3	72.025	- 4 52 22.61	0.09	2	72.416				12458
14223	-36	9562	8.5	G5	14 39 52.056	0.07	3	70.251	-37 07 47.56	0.22	3	70.251				12459
14224	-66	2618	8.0	K0	39 54.680	0.05	4	69.852	-67 11 31.72	0.05	4	69.852				19702
14225	-18	3882	7.00	K0	39 56.350	0.08	4	71.914	-19 05 58.82	0.12	4	71.914	3165	19806	3324	12460
14226	+ 2	2854	8.1	G5	39 59.350	0.15	2	70.773	+ 2 30 27.19	0.02	2	70.773				12461
14227	-78	886	7.9	K5	40 01.006	0.08	4	69.812	-78 54 32.96	0.04	4	69.812				19703
14227 SP					14 40 01.028	0.11	4	69.624	-78 54 32.65	0.18	4	69.624				19703
14228	- 5	3934	8.5	F5	40 01.850	0.16	2	72.711	- 5 45 08.61	0.02	2	72.711		19808		12462
14229	+ 5	2912	8.5	K0	40 04.596	0.10	2	72.412	+ 4 41 57.00	0.24	2	72.412				12463
14230	-29	11260	8.5	K0	40 09.850	0.14	4	70.173	-30 08 49.07	0.12	4	70.173				12464
14231	- 5	3936	3.95	F5	40 25.434	0.06	30	71.322	- 5 26 37.68	0.05	29	71.293	545	19816	3325	30545
14232	- 8	3820	8.8	F5	14 40 28.939	0.13	3	72.931	- 9 07 56.88	0.25	3	72.931				12465
14233	-22	3833	8.5	K0	40 32.106	0.11	5	70.634	-22 48 16.82	0.13	4	70.258				12466
14234	-34	9868	4.13	K0	40 35.330	0.03	43	71.383	-34 57 38.27	0.06	43	71.383	544	19820	3326	30544
14235	+ 1	2966	8.8	F2	40 40.128	0.07	2	71.840	+ 1 32 29.26	0.24	2	71.840				12467
14236	-51	8416	8.5	K2	40 40.161	0.12	5	70.368	-51 46 54.52	0.06	5	70.368				1748
14237	+ 2	2855	7.8	A0	14 40 40.840	0.15	2	69.820	+ 2 02 11.95	0.61	2	69.820				12468
14238	-40	8923	9.0	G5	40 52.968	0.17	4	70.182	-40 46 40.85	0.07	4	70.182				1749
14239	-52	7456	8.1	K0	40 53.387	0.08	4	70.269	-53 03 39.70	0.08	4	70.269				12469
14240	-43	9286	9.1	K0	41 04.019	0.14	4	70.203	-44 01 17.01	0.10	4	70.203				1750
14241	-38	9603	8.7	G5	41 07.087	0.06	4	70.317	-39 16 57.42	0.13	4	70.317				12470

14177 8.8m-10.0m, 0°3, 300°.

14197 SDS, 11.0m, 2°1, 7°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
14242	-1	2981	7.17	A2	14 41 10.931	0.09	2	69.750	-2 17 38.65	0.11	2	69.750		19829		12471
14243	-69	2089	7.3	K0	41 13.185	0.12	4	70.165	-69 24 30.98	0.18	4	70.165				19704
14244	+27	2413	4.9v	M0	41 13.409	0.03	73	71.425	+26 44 21.53	0.05	73	71.425	1383	19831	3327	81383
14245	-57	6776	7.6	G5	41 27.869	0.14	4	70.109	-57 19 33.38	0.17	4	70.109				12472
14246	-49	9025	8.0	K2	41 30.388	0.08	4	70.057	-50 19 10.21	0.11	4	70.057				1751
14247	-78	893	3.81	K5	14 41 32.850	0.03	70	71.064	-78 50 06.08	0.04	67	71.009	542	19834	3328	30542
14247	SP				41 32.838	0.05	60	71.116	-78 50 06.05	0.07	58	71.125	542	19834	3328	50542
14248	-7	3897	6.60	F5	41 34.078	0.10	2	71.445	-8 02 29.86	0.30	2	71.445		19836	3329	12473
14249	-55	6152	7.68	K0	41 41.404	0.09	5	70.530	-55 23 45.88	0.06	5	70.530		19838		12474
14250	-16	3929	8.4	K2p	41 42.212	0.16	2	71.995	-16 39 49.97	0.21	2	71.995				12475
14251	-59	5705	8.4	K2	14 41 43.670	0.02	4	69.967	-59 21 37.85	0.14	4	69.967				12476
14252	-24	11647	8.5	K0	41 43.853	0.05	4	69.857	-24 50 18.30	0.09	4	69.857				12477
14253*	-19	3950	9.0	F2	41 53.067	0.07	4	69.460	-20 16 16.86	0.03	4	69.460				12478
14254	-2	3890	7.4	F2	41 54.490	0.04	2	71.438	-3 09 08.83	0.10	2	71.438				12479
14255	-38	9612	8.3	M1	41 59.426	0.19	4	70.264	-38 32 39.02	0.15	4	70.264				12480
14256	-13	3965	8.7	K8	14 42 01.845	0.25	2	72.338	-13 37 56.00	0.18	2	72.338				12481
14257	-46	9551	9.0	G5	42 02.589	0.04	3	70.647	-46 53 31.04	0.29	3	70.647				1752
14258	-9	3986	6.84	F2	42 04.037	0.15	4	72.040	-9 29 35.38	0.01	2	72.380	19846	3332		12482
14259	-65	2858	7.9	K0	42 05.112	0.14	4	69.906	-65 54 23.38	0.15	4	69.906				19705
14260	-67	2643	8.3	G5	42 12.232	0.12	4	69.925	-67 54 43.31	0.08	4	69.925				19706
14261	+2	2858	8.2	K2	14 42 13.408	0.14	3	72.863	+2 14 06.55	0.30	2	73.205				12483
14262	-2	3891	8.5	K0	42 15.554	0.08	2	70.739	-2 51 04.95	0.07	2	70.739				12484
14263	-47	9387	8.5	G5	42 15.990	0.11	4	70.648	-47 29 07.08	0.16	4	70.648				1753
14264	-29	11284	8.8	F8	42 17.594	0.18	4	69.870	-29 43 41.86	0.23	4	69.870				12485
14265	-32	10346	9.3	K5	42 18.842	0.17	4	70.154	-33 03 25.41	0.17	3	70.404				12486
14266	+4	2909	7.9	G5	14 42 24.537	0.07	2	72.074	+3 41 40.66	0.07	2	72.074				12487
14267	-45	9396	9.4	K0	42 25.121	0.09	5	71.271	-45 57 33.61	0.16	4	71.052				1754
14268	-26	10489	8.5	G5	42 25.284	0.09	4	70.301	-26 59 50.25	0.09	4	70.301				12488
14269	-6	4066	8.5	G0	42 31.785	0.07	2	72.343	-6 41 00.36	0.21	2	72.343				12489
14270	-64	3010	8.7	K0	42 36.042	0.10	4	70.306	-64 33 06.44	0.14	4	70.306				19707
14271	+5	2915	8.86	G0	14 42 44.599	0.46	2	70.365	+4 44 29.97	0.28	2	70.365		19855		12490
14272	-55	6161	8.5	F8	42 52.853	0.07	4	70.610	-55 58 29.86	0.18	4	70.610				12491
14273	-35	9770	8.4	K0	42 53.930	0.08	4	70.495	-36 14 09.24	0.26	4	70.495				12492
14274	-41	9126	8.5	K5	42 54.216	0.14	4	70.864	-41 56 17.83	0.21	4	70.864				1755
14275	-48	9318	8.0	K0	42 54.564	0.11	4	70.090	-48 26 42.63	0.04	4	70.090				1756
14276	-36	9599	9.2	K5	14 43 02.828	0.16	4	71.496	-37 01 25.23	0.14	4	71.496				12493
14277	-17	4172	8.0	K5	43 05.189	0.04	2	70.746	-17 29 18.10	0.06	2	70.746				12494
14278	-34	9904	8.9	G5	43 11.859	0.11	4	70.264	-35 08 23.27	0.04	4	70.264				12495
14279f	-14	4023	6.60	K0	43 11.978	0.11	2	71.813	-15 14 59.47	0.21	2	71.813		19870		12496
14280	-22	3844	5.91	K0	43 14.217	0.10	6	69.102	-22 56 34.36	0.19	6	69.102	3167	19871	3336	33167
14281	-18	3891	8.2	A2	14 43 14.366	0.04	2	70.867	-18 46 10.37	0.24	2	70.867				12497
14282	-3	3667	8.8	G8	43 18.071	0.14	2	70.902	-4 11 33.80	0.18	2	70.902				12498
14283	-42	9650	9.0	K2	43 23.153	0.11	4	70.514	-42 57 13.90	0.10	4	70.514				1757
14284	-31	11446	8.0	K0	43 26.610	0.15	4	70.666	-31 28 22.39	0.17	4	70.666				12499
14285	-51	8457	5.20	K0	43 30.533	0.04	46	71.267	-52 10 25.45	0.04	45	71.247	546	19876	3337	30546
14286	-7	3903	7.4	G5	14 43 33.794	0.24	3	72.874	-7 35 14.84	0.09	2	73.221				12500
14287	-44	9599	9.1	K2	43 40.297	0.26	3	70.312	-44 32 27.17	0.23	3	70.312				1758
14288	-9	3988	8.7	K0	43 42.376	0.17	2	72.742	-10 17 15.17	0.04	2	72.742				12501
14289	+2	2862	3.76	A0	43 42.905	0.04	18	72.100	+2 06 08.53	0.08	18	72.100	547	19884	3338	30547
14290	-0	2875	7.5	K0	43 43.453	0.04	2	72.379	-0 37 28.99	0.37	2	72.379				12502
14291	+15	2758	6.10	M3	14 43 44.336	0.10	6	70.807	+15 20 27.39	0.16	6	70.807	3168	19885	3339	33168
14292	-31	11451	8.7	K0	43 47.959	0.16	4	70.686	-32 12 07.54	0.11	4	70.686				12503
14293	-0	2878	8.9	M0	43 52.283	0.16	2	71.894	-1 14 15.40	0.33	2	71.894				12504
14294	-61	4708	8.3	K0	43 53.618	0.06	5	70.646	-61 22 47.36	0.06	5	70.646				12505
14295	-63	3413	7.9	K5	43 53.965	0.13	4	69.860	-63 43 11.06	0.06	4	69.860				12506
14296	-21	3964	8.3	K7	14 44 00.327	0.10	4	70.341	-22 15 50.68	0.08	4	70.341				12507
14297	-70	1807	7.48	K0	44 03.539	0.11	4	70.113	-70 23 26.64	0.14	4	70.113		19891		19708
14298	-52	7508	8.0	G5	44 12.681	0.07	4	69.857	-52 23 21.68	0.33	4	69.857				12508
14299	-27	10049	8.5	G5	44 14.733	0.09	4	70.390	-28 06 24.45	0.14	4	70.390				12509
14300	-20	4093	6.11	K2	44 22.727	0.24	4	70.094	-21 06 58.46	0.22	4	70.094		19895		12510
14301	-58	5714	7.8	K0	14 44 23.003	0.06	4	69.357	-58 21 48.26	0.29	4	69.357				12513
14302	-10	3961	8.6	G5	44 23.011	0.02	2	72.353	-11 20 32.65	0.38	2	72.353				12511
14303	-10	3962	8.2	A3	44 23.065	0.14	3	72.308	-11 09 37.45	0.32	2	72.391		19896		12512
14304	-34	9922	9.3	K2	44 25.088	0.15	4	69.768	-34 34 54.68	0.17	4	69.768				12514
14305	-29	11309	8.1	K0	44 25.292	0.16	4	69.812	-30 08 35.73	0.16	4	69.812				12515
14306	-48	9346	8.5	G5	14 44 35.667	0.12	4	69.790	-49 14 00.16	0.08	4	69.790				1759
14307	-3	3673	8.0	F5	44 35.915	0.02	2	70.402	-4 01 31.96	0.00	2	70.402				12516
14308	-61	4716	9.1	K2	44 46.376	0.13	4	69.357	-62 03 14.63	0.17	4	69.357				12517
14309	-25	10537	5.39	G5	44 49.334	0.03	58	71.132	-25 52 44.86	0.03	57	71.115	1385	19904	3340	31385
14310	-82	619	8.7	M1	44 49.846	0.17	5	70.576	-82 28 34.17	0.15	5	70.576				19709
14310	SP				14 44 49.411	0.41	4	69.817	-82 28 34.02	0.25	4	69.817				19709
14311	+2	2865	7.6	A2	44 53.575	0.01	2	71.484	+2 14 39.83	0.05	2	71.484		19906		12518
14312	-12	4133	8.4	F2	44 54.997	0.10	2	71.482	-12 43 34.83	0.01	2	71.482				12519
14313	+0	3243	8.3	G5	44 59.039	0.35	2	70.899	-0 04 19.22	0.01	2	70.899				12520
14314	-26	10519	5.80	B9	45 01.626	0.04	4	70.785	-26 26 16.70	0.14	4	70.785		19908		12521

14244 4.9m to 5.3m.

14253 9.8m-10.0m, 0°2, 146°.

14279 A 9376, 11.3m, 2°8, 248°.

CATALOG OF 23,001 STARS FOR 1950.0

433

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
14315	-58	5718	8.7	K0	14 45 10.516	0.06	4	69.427	-58 26 50.75	0.14	4	69.427				12522
14316	-4	3749	7.3	K2	45 24.331	0.21	2	70.362	-5 17 54.99	0.15	2	70.362				12523
14317	-81	678	8.3	K2	45 33.551	0.12	6	71.479	-81 38 41.38	0.14	5	71.526				19710
14317	SP				45 33.527	0.17	4	70.109	-81 38 41.06	0.31	4	70.109				19710
14318	-60	5525	8.8	G5	45 34.882	0.13	5	70.895	-60 25 53.36	0.04	5	70.895				12524
14319p	-58	5722	8.4	G5	14 45 36.434	0.08	4	70.110	-59 14 21.02	0.11	4	70.110				12525
14320	-14	4031	9.0	K0	45 39.549	0.04	2	70.430	-15 01 08.50	0.16	2	70.430				12526
14321	-56	6445	7.8	F5	45 40.255	0.07	4	69.794	-57 13 49.49	0.11	4	69.794				12527
14322	-37	9710	8.3	G5	45 45.567	0.13	4	69.795	-37 25 31.36	0.14	4	69.795				12528
14323	-39	9240	7.6	K2	45 47.067	0.12	4	70.199	-40 12 48.47	0.11	4	70.199				1760
14324	-49	9085	8.5	K0	14 45 49.803	0.20	4	70.262	-49 26 49.49	0.14	4	70.262				1761
14325	-8	3836	8.2	K0	45 51.284	0.18	2	70.051	-8 56 52.67	0.17	2	70.051				12529
14326	-35	9820	7.68	A2	45 56.144	0.19	4	69.860	-35 20 33.60	0.22	3	70.012	19925			12530
14327	+3	2939	8.3	G0	45 58.278	0.10	2	71.437	+3 30 12.22	0.48	2	71.437				12531
14328	-6	4077	8.1	F0	46 01.479	0.00	2	71.467	-6 53 58.44	0.10	2	71.467				12532
14329	-12	4137	7.9	K0	14 46 04.856	0.01	2	71.435	-12 54 43.07	0.21	2	71.435	19927			12533
14330	-47	9452	8.0	G5	46 05.323	0.18	4	70.344	-47 35 25.98	0.12	4	70.344				1762
14331	-33	10092	8.2	K2	46 13.404	0.15	3	70.241	-33 48 46.35	0.07	3	70.241				12534
14332	-0	2886	6.06	A0	46 19.753	0.07	6	68.799	-0 38 26.21	0.06	6	68.799	3169	19932	3342	33169
14333	-35	9824	8.9	K5	46 22.565	0.18	4	70.275	-35 50 09.61	0.15	4	70.275				12535
14334	-27	10065	8.7	K5	14 46 24.767	0.08	4	70.794	-27 53 12.86	0.09	4	70.794				12536
14335*	-10	3967	7.51	F8	46 28.579	0.10	2	70.399	-10 37 12.50	0.26	2	70.399				12537
14336	-29	11338	9.0	K2	46 32.516	0.13	5	70.990	-30 12 20.33	0.18	5	70.990				12538
14337	-19	3966	7.06	A3	46 37.778	0.27	2	71.935	-19 41 48.48	0.26	2	71.935			3343	12539
14338	-5	3953	8.0	K5	46 43.220	0.05	2	72.680	-5 35 04.24	--	1	73.223				12540
14339	-7	3909	7.08	F5	14 46 44.952	0.29	2	71.443	-8 17 50.31	0.32	2	71.443	19940			12541
14340	-1	2989	8.9	G0	46 50.471	0.15	2	72.350	-1 48 12.85	0.18	2	72.350				12542
14341	-38	9683	8.3	G5	46 55.690	0.14	5	70.869	-38 19 37.77	0.11	5	70.869				12543
14342	-51	8504	9.1	G5	46 58.531	0.03	4	69.267	-51 56 50.35	0.12	4	69.267				1763
14343	-75	1032	8.7	K5	47 00.373	0.19	6	70.858	-76 14 47.42	0.17	5	70.936				19711
14343	SP				14 47 00.155	0.41	3	70.109	-76 14 47.49	0.08	3	70.109	3170	19946		19711
14344	+10	2748	6.77	K0	47 00.518	0.09	6	69.253	+10 15 05.43	0.07	6	69.253				33170
14345	-53	6130	8.1	K0	47 00.764	0.11	4	70.322	-53 25 45.96	0.13	4	70.322				12544
14346	-23	11922	8.4	F5	47 01.885	0.12	4	70.284	-24 00 48.15	0.15	4	70.284				12545
14347	-54	6178	8.6	K0	47 02.439	0.08	4	69.920	-55 12 52.94	0.10	4	69.920				12546
14348	-61	4735	8.8	K0	14 47 04.690	0.22	4	70.117	-61 43 35.53	0.11	4	70.117				12547
14349	+2	2869	7.83	K0	47 05.978	0.28	2	69.805	+1 42 39.64	0.02	2	69.805			3345	12548
14350	-54	6179	6.98	K2	47 06.250	0.05	4	69.857	-54 48 11.24	0.12	4	69.857	19948			12549
14351	+4	2924	7.5	K0	47 13.686	0.07	2	72.020	+4 04 39.27	0.20	2	72.020				12550
14352	-44	9643	8.5	K0	47 15.835	0.13	4	69.833	-44 56 00.08	0.18	4	69.833				1764
14353	-15	3964	8.8	A3	14 47 20.947	0.19	2	72.368	-16 12 00.32	0.23	2	72.368				12551
14354	-50	8851	9.5	G5	47 35.258	0.20	4	70.356	-50 20 12.42	0.13	4	70.356				1765
14355	-7	3911	8.6	K5	47 35.772	0.03	3	72.632	-7 39 30.39	0.04	2	72.859				12552
14356	-66	2656	8.2	K0	47 43.557	0.12	4	69.411	-66 52 05.01	0.01	4	69.411				19712
14357	+29	2581	5.66	A2	47 49.164	0.22	6	70.014	+28 49 18.82	0.03	6	70.014	3171	19966	3349	33171
14358	-39	9275	7.9	K0	14 47 50.885	0.23	4	70.275	-39 28 28.79	0.19	4	70.275				12553
14359	-11	3814	7.14	F2	47 53.006	0.24	3	71.210	-11 48 44.26	0.06	2	70.744	19967			12554
14360	-15	3965	5.33	F5	47 54.816	0.02	121	71.124	-15 47 27.16	0.03	118	71.093	1387	19970	3350	81387
14361	-48	9402	8.5	K5	47 57.820	0.14	4	69.845	-48 24 49.68	0.08	4	69.845				1766
14362	+24	2786	5.81	G0	48 01.760	0.10	6	69.771	+24 07 02.89	0.18	6	69.771	3172	19974		33172
14363	-71	1655	8.8	K5	14 48 02.036	0.08	3	70.063	-71 25 33.17	0.08	4	70.395				19713
14364	-15	3966	2.90	A3	48 06.278	0.04	42	71.727	-15 50 08.03	0.05	42	71.727	548	19975	3351	30548
14365	-43	9391	4.49	B5	48 21.793	0.11	6	70.789	-43 22 11.57	0.13	6	70.789	19977			21074
14366	-27	10082	8.4	A0	48 28.561	0.07	4	69.373	-27 25 54.62	0.14	4	69.373				12555
14367	+0	3254	8.4	G5	48 28.843	0.12	2	70.399	+0 10 42.25	0.05	2	70.399				12556
14368	-13	3994	8.2	K2	14 48 29.819	0.03	2	70.425	-13 24 05.79	0.00	2	70.425				12557
14369	+1	2988	8.5	A3	48 35.449	0.12	2	71.784	+0 45 44.06	0.02	2	71.784				12558
14370	-17	4193	8.8	A2	48 37.343	0.06	5	72.079	-17 40 16.51	0.11	5	72.079				12559
14371*	-9	4014	8.5	K0	48 46.114	0.13	4	72.531	-10 20 40.05	0.13	3	72.662				12560
14372	-17	4196	6.67	F5	48 46.803	0.15	2	71.896	-17 35 03.28	0.44	2	71.896	19985			12561
14373	-14	4050	8.3	K2	14 48 48.258	0.14	2	71.971	-14 52 36.12	0.74	2	71.971				12562
14374	-1	2992	8.6	G5	48 50.389	0.01	2	72.649	-2 15 04.51	0.45	2	72.649				12563
14375	-33	10120	8.7	M0	48 50.512	0.13	4	69.782	-34 16 31.14	0.05	4	69.782				12564
14376	-36	9689	8.0	K0	48 51.215	0.27	3	69.652	-36 25 20.32	0.12	3	69.652				12565
14377	-79	789	9.1	G5	48 53.584	0.10	4	69.828	-79 36 08.30	0.16	4	69.828				19714
14377	SP				14 48 53.539	0.17	4	69.788	-79 36 08.19	0.13	4	69.788				19714
14378	-20	4107	7.7	K0	48 54.380	0.05	4	69.901	-20 24 33.51	0.13	4	69.901				12566
14379	-72	1606	9.1	K0	48 56.633	0.24	5	70.959	-72 26 37.95	0.10	5	70.959				19715
14380	-67	2676	7.6	K0	48 57.037	0.22	4	69.923	-68 11 13.64	0.23	4	69.923				19716
14381	-74	1256	9.1	G5	48 58.189	0.14	4	70.369	-74 18 59.81	0.17	4	70.369				19717
14382	-51	8534	9.1	K0	14 49 06.929	0.09	4	70.615	-52 04 19.83	0.12	4	70.615				12567
14383	-75	1041	7.4	K2	49 10.302	0.21	5	70.061	-75 23 53.09	0.16	5	70.061				19718
14383	SP				49 10.214	0.26	4	69.376	-75 23 52.90	0.28	4	69.376				19718
14384	-26	10563	8.3	G5	49 17.046	0.06	4	70.554	-26 25 05.72	0.04	4	70.554				12568
14385*	-63	3441	8.6	K0	49 19.157	0.22	4	70.385	-63 42 18.40	0.13	4	70.385				12569

14319 11.5m, 2nd, 9th.14335 A 9395, 7.8m-9.0m, 0th, 114th.14371 8.9m-9.8m, 0th, 259th.14385 9.4m-9.8m, 0th, 106th.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
14386	-32 10425	8.76	G5	14 49 20.600	0.02	4	69.795	-32 40 19.30	0.44	3	69.926	19996			12570
14387	-45 9484	9.5	K5	49 23.056	0.10	4	70.303	-45 23 10.48	0.13	4	70.303				1767
14388	-41 9235	9.0	K0	49 23.465	0.08	5	71.012	-41 52 14.10	0.13	4	70.727				1768
14389	-62 4322	8.7	K2	49 26.119	0.28	4	69.856	-62 18 55.06	0.10	4	69.856				12571
14390	-31 11534	8.3	K5	49 28.987	0.06	4	70.592	-31 48 19.26	0.13	4	70.592				12572
14391	-9 4017	8.6	G0	14 49 37.647	0.08	3	71.933	-9 44 54.73	0.25	2	71.819				12573
14392	-10 3976	8.2	K0	49 38.198	0.07	3	71.771	-11 16 06.94	0.18	2	72.033				12574
14393	-56 6473	7.6	K2	49 38.719	0.13	4	69.412	-56 40 39.30	0.08	4	69.412				12575
14394	-3 3683	8.7	K0	49 38.859	0.02	2	69.805	-3 48 43.68	0.21	2	69.805				12576
14395	-24 11721	8.0	G5	49 42.232	0.13	4	70.668	-25 14 58.32	0.09	4	70.668				12577
14396	-37 9760	5.11	B8	14 49 42.250	0.06	6	69.193	-37 35 55.57	0.10	6	69.193	3173	20000	3358	33173
14397	-15 3976	8.3	K2	49 51.812	0.37	2	71.899	-16 11 36.99	-	1	71.501	20006			12578
14398	-0 2895	8.8	F5	49 57.637	0.08	2	70.495	-1 12 12.46	0.22	2	70.495				12579
14399	-46 9650	8.5	K2	49 58.232	0.15	4	69.737	-46 46 09.90	0.16	4	69.737				1769
14400	-85 415	7.78	K2	50 04.033	0.05	4	69.822	-86 16 21.50	0.07	4	69.822	20011			19719
14400 SP				14 50 03.967	0.17	4	69.385	-86 16 21.00	0.31	3	68.915	20011			19719
14401	-54 6205	7.7	G5	50 15.375	0.16	5	70.466	-54 50 39.44	0.09	5	70.466				12580
14402	-22 3858	8.4	F0	50 24.623	0.09	4	69.846	-23 15 52.90	0.07	4	69.846				12581
14403	-21 3985	8.6	A5	50 26.435	0.09	4	70.581	-21 24 03.47	0.30	4	70.581				12582
14404	-65 2918	6.16	B3	50 26.698	0.09	6	70.918	-65 47 16.41	0.08	6	70.918	20017			21075
14405	-80 742	8.8	F0	14 50 28.848	0.08	7	71.158	-81 00 08.36	0.31	4	71.060				19720
14405 SP				50 28.859	0.23	4	69.589	-81 00 08.19	0.35	4	69.589				19720
14406	-42 9772	8.0	K2	50 30.545	0.19	4	69.812	-42 57 30.83	0.03	4	69.812				1770
14407	-6 4097	8.5	F5	50 32.140	0.03	2	69.918	-7 02 01.71	0.33	2	69.918				12583
14408	-73 1390	8.3	K0	50 35.024	0.09	4	69.309	-73 32 55.66	0.13	4	69.309				19721
14409	+3 2948	8.8	K0	14 50 37.357	0.08	3	70.770	+2 55 47.24	0.13	3	70.770				12584
14410	-43 9432	8.5	G5	50 43.726	0.21	4	70.526	-43 23 40.20	0.13	4	70.526				1771
14411	-18 3924	8.2	G5	50 46.934	0.12	2	70.387	-18 56 37.95	0.17	2	70.387				12585
14412	-27 10103	7.49	G5	50 48.425	0.12	4	70.038	-28 12 07.85	0.23	4	70.038	20026			12586
14413	-19 3978	7.9	F2	50 49.829	0.01	2	71.463	-19 46 08.28	0.12	2	71.463				12587
14414	-60 5558	7.46	M0	14 51 00.644	0.12	4	69.364	-60 52 22.65	0.13	4	69.364				12588
14415	-70 1856	8.2	G5	51 04.217	0.03	4	68.893	-70 19 03.98	0.25	4	68.893				19722
14416	+2 2881	7.14	K5	51 07.284	0.17	2	71.486	+2 26 27.51	0.05	2	71.486	20036			12589
14417	-24 11733	8.4	K2	51 10.899	0.07	4	69.679	-24 27 04.54	0.09	4	69.679				12590
14418	+6 2957	6.69	K0	51 11.165	0.02	84	71.713	+6 26 41.99	0.03	82	71.708	1388	20039	3363	31388
14419	+0 3264	8.03	K0	14 51 12.622	0.27	2	72.072	+0 13 17.73	0.27	2	72.072				12591
14420	-50 8901	8.5	K5	51 17.555	0.06	4	69.382	-50 37 12.91	0.10	4	69.382				1772
14421	-37 9781	8.1	K0	51 22.066	0.16	4	70.669	-38 03 21.85	0.16	4	70.669				12592
14422*	-4 3770	7.3	K0	51 22.574	0.05	3	71.854	-5 22 05.99	0.69	2	72.061				12593
14423	-34 10015	8.5	G5	51 24.823	0.12	4	70.305	-34 43 00.52	0.14	4	70.305				12594
14424	-60 5560	8.3	K0	14 51 26.122	0.14	4	69.317	-60 18 57.75	0.19	4	69.317				12595
14425	-38 9754	8.28	K0	51 26.339	0.07	3	70.285	-39 06 21.83	0.10	3	70.285	20048			12596
14426	-29 11387	8.5	A0	51 40.686	0.11	4	69.433	-29 39 00.35	0.08	4	69.433				12597
14427	-59 5753	5.24	K0	51 41.714	0.11	6	69.702	-59 54 39.32	0.09	6	69.702	3174	20054	3365	33174
14428	-7 3921	7.48	K0	51 48.351	0.05	2	72.058	-8 11 09.05	0.60	2	72.058			3366	12598
14429	-32 10459	9.1	K2	14 51 51.695	0.16	4	70.904	-32 36 38.00	0.24	4	70.904				12599
14430	-46 9672	7.6	G5	51 56.648	0.08	4	70.186	-46 25 43.59	0.11	3	70.447				1773
14431	-4 3772	8.5	K5	51 59.110	0.35	2	69.805	-4 50 53.57	0.29	2	69.805				12600
14432	-76 924	5.0v	K2	52 06.358	0.10	6	70.243	-76 27 41.03	0.32	6	70.243	3175	20057	3367	33175
14432 SP				52 06.351	0.14	6	69.637	-76 27 40.85	0.48	6	69.637	3175	20057	3367	53175
14433	-3 3687	7.7	F2	14 52 20.691	0.10	2	70.549	-3 25 42.53	0.06	2	70.549				12601
14434	+3 2955	8.3	K2	52 24.384	0.55	2	71.493	+2 37 15.10	0.08	2	71.493				12602
14435	-30 11813	8.0	K0	52 25.004	0.11	4	70.717	-31 12 58.59	0.10	4	70.717				12603
14436	-44 9709	7.94	K2	52 29.263	0.09	4	70.809	-44 29 41.61	0.08	3	70.313	20061			1774
14437	-25 10610	8.60	K5	52 31.059	0.17	4	70.358	-25 24 48.54	0.07	4	70.358	20062			12604
14438	-33 10169	5.34	A0	14 52 40.112	0.03	79	71.529	-33 39 14.35	0.03	75	71.533	1389	20066	3368	31389
14439	-1 2997	8.8	F8	52 40.867	0.26	2	71.443	-1 54 43.57	0.14	2	71.443				12605
14440	-62 4337	5.42	B3	52 40.911	0.11	7	71.166	-62 34 46.38	0.16	7	71.166	20067			21076
14441	-52 7634	5.56	A2	52 42.854	0.12	6	71.079	-52 36 29.12	0.21	6	71.079	3176	20068	3369	33176
14442	-64 3047	7.8	K0	52 44.042	0.08	4	69.283	-64 53 47.44	0.05	4	69.283				19723
14443	-8 3860	7.8	K0	14 52 44.204	0.17	2	71.956	-9 16 20.39	0.35	2	71.956				12606
14444	-82 629	5.60	K0	52 49.170	0.09	6	69.114	-83 01 43.87	0.18	6	69.114	3987	20070	3370	33987
14444 SP				52 49.174	0.18	6	69.149	-83 01 43.97	0.12	6	69.149	3987	20070	3370	53987
14445p	-66 2678	7.3	K0	52 50.842	0.32	4	69.858	-66 40 17.02	0.17	4	69.858				19724
14446	-12 4164	8.6	K0	52 58.023	0.04	3	71.347	-12 26 34.46	0.12	3	71.347				12607
14447	+1 3002	8.5	G5	14 52 59.982	0.08	3	71.232	+0 56 00.16	0.25	2	70.779				12608
14448	-70 1868	7.9	K2	53 00.331	0.18	4	69.345	-71 11 31.91	0.07	4	69.345				19725
14449	-17 4214	8.8	G5	53 01.524	0.18	2	71.843	-18 09 56.18	0.22	2	71.843				12609
14450	-36 9755	8.7	K0	53 05.212	0.12	4	71.051	-36 51 53.22	0.16	4	71.051				12610
14451	-34 10041	8.5	M0	53 05.556	0.16	4	70.828	-35 11 10.59	0.11	4	70.828				12611
14452	-13 4015	7.8	F0	14 53 08.112	0.05	2	70.732	-13 41 56.69	0.04	2	70.732				12612
14453	-48 9477	8.3	G5	53 14.572	0.16	4	70.286	-48 19 56.52	0.12	4	70.286				1775
14454	-42 9819	8.0	K0	53 18.855	0.19	4	70.637	-43 15 17.66	0.19	3	70.328				1776
14455	-21 3994	8.0	K0	53 31.952	0.13	4	70.112	-21 47 03.03	0.12	4	70.112				12613
14456	-37 9800	9.0	K2	53 32.298	0.09	4	70.537	-37 35 37.33	0.20	4	70.537				12614

14422 7.8m-11.0m, 0°5, 309°.
14432 5.0m to 6.2m.

14445 SDS, 11.0m, 2°5, 78°.

CATALOG OF 23,001 STARS FOR 1950.0

435

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
14457	-34	10050	8.0	F0	14 53 35.483	0.01	4	70.695	-35 02 18.97	0.08	4	70.695				18456
14458	-5	3966	8.09	K0	53 36.819	0.02	2	69.881	-6 10 47.37	0.21	2	69.881		20089		12615
14459	-29	11416	9.2	K0	53 51.253	0.12	4	70.611	-30 04 50.77	0.18	4	70.611				12616
14460	+15	2796	5.77	A0	53 51.468	0.07	12	71.470	+14 38 50.41	0.06	11	71.368	551	20092	3374	30551
14461	-25	10619	6.81	A0	54 00.937	0.20	4	70.971	-26 05 02.86	0.29	4	70.971		20095		12617
14462	-10	3989	5.63	K0	14 54 03.056	0.06	16	71.759	-11 12 32.46	0.06	16	71.759	1390	20096	3375	31390
14463	-4	3779	8.5	F5	54 06.203	0.10	2	72.695	-4 55 46.87	0.43	2	72.695				12618
14464	-77	1030	8.8	K2	54 11.595	0.06	5	70.630	-77 44 07.63	0.16	4	70.477				19726
14464	SP				54 11.655	0.12	4	69.594	-77 44 07.37	0.36	4	69.594				19726
14465	-15	3990	8.8	F2	54 19.755	0.21	2	70.998	-16 18 51.98	0.21	2	70.998				12619
14466	+4	2939	8.5	K0	14 54 22.999	0.05	2	71.811	+4 12 03.60	0.20	2	71.811				12620
14467	-3	3696	4.59	F0	54 33.978	0.15	6	71.316	-4 08 41.41	0.17	6	71.316	3177	20115		33177
14468	-20	4125	6.00	K5	54 34.024	0.06	25	71.692	-21 12 05.74	0.05	25	71.692	1391	20113	3376	31391
14469	-24	11772	7.16	A2	54 36.116	0.06	4	69.785	-25 14 29.57	0.05	4	69.785				12621
14470	-48	9494	6.48	K0	54 41.995	0.10	6	70.280	-48 39 37.44	0.12	6	70.280	3178	20118		33178
14471	-32	10497	8.9	F8	14 54 47.471	0.09	4	70.296	-33 04 25.43	0.18	4	70.296				12622
14472	+22	2764	6.24	A0	54 48.292	0.05	33	71.118	+21 45 21.26	0.08	29	70.976	1392	20120	3378	81392
14473	-13	4026	8.7	A2	54 48.881	0.14	2	71.858	-13 30 15.23	0.03	2	71.858				12623
14474	-57	6856	8.0	M1	54 53.507	0.05	4	69.340	-57 39 05.03	0.06	4	69.340				12624
14475	-51	8614	8.5	F2	54 58.038	0.13	4	69.319	-51 38 17.16	0.11	4	69.319				1777
14476	-38	9806	8.8	K0	14 54 58.386	0.16	4	70.541	-38 35 02.12	0.07	4	70.541				12625
14477	+0	3277	5.71	K0	54 59.302	0.02	87	71.348	+0 01 57.33	0.03	84	71.371	1393	20122	3379	81393
14478	-11	3841	7.56	M3	55 02.549	0.01	2	72.690	-12 14 14.89	0.15	2	72.690		20124		12626
14479	-3	3698	7.6	F5	55 06.161	0.02	2	72.072	-3 49 53.07	0.09	2	72.072				12627
14480	-79	792	8.9	K0	55 12.393	0.14	5	70.864	-80 04 46.47	0.11	5	70.864				19727
14480	SP				14 55 12.319	0.17	4	70.313	-80 04 46.26	0.16	4	70.313				19727
14481	-42	9853	2.81	B2p	55 14.742	0.06	10	71.099	-42 56 02.89	0.11	10	71.099	552	20128	3380	30552
14482	-54	6233	8.8	K0	55 18.885	0.20	4	69.850	-55 15 56.03	0.21	4	69.850				12628
14483	-26	10633	8.0	G5	55 22.628	0.16	4	70.168	-27 07 39.13	0.07	4	70.168				12629
14484	-83	572	8.2	K0	55 25.946	0.03	4	69.780	-83 27 02.85	0.17	4	69.780				19728
14484	SP				14 55 26.071	0.12	4	69.996	-83 27 02.32	0.14	4	69.996				19728
14485	-10	3994	6.42	A0	55 30.562	0.13	2	69.859	-10 57 18.77	0.19	2	69.859		20136		12630
14486	-28	11070	7.5	F8	55 31.533	0.03	4	70.853	-28 30 33.66	0.17	4	70.853				12631
14487	-45	9559	8.32	A2	55 34.691	0.09	4	71.272	-45 50 39.91	0.21	3	70.968		20139		1778
14488	-52	7672	8.4	K0	55 34.885	0.12	4	69.345	-53 17 27.91	0.20	4	69.345				12632
14489	-47	9575	7.2	K0	14 55 40.004	0.11	4	70.846	-47 45 29.87	0.17	3	70.363				1779
14490	-42	9861	8.5	K0	55 46.794	0.07	4	70.615	-42 22 22.29	0.08	4	70.615				1780
14491	-34	10081	8.6	K5	55 50.611	0.12	5	71.395	-34 37 30.51	0.07	4	71.204				12633
14492	-23	11994	8.5	K2	55 51.178	0.15	4	70.621	-23 39 04.52	0.21	4	70.621				12634
14493	-17	4225	8.6	A2	55 53.421	0.04	2	69.879	-17 28 48.51	0.27	2	69.879				12635
14494	-41	9342	3.35	B3	14 55 53.861	0.05	40	71.308	-41 54 18.20	0.05	38	71.224	553	20146	3383	30553
14495	-40	9156	8.05	K0	55 55.083	0.12	4	70.826	-40 53 06.98	0.12	4	70.826		20149		1781
14496	-5	3977	8.0	K0	55 57.944	0.10	2	69.940	-6 13 42.69	0.03	2	69.940				12636
14497	-49	9227	9.1	K0	56 01.901	0.07	5	71.472	-49 51 16.04	0.17	4	71.303				1782
14498	-37	9836	6.49	B8	56 03.952	0.06	6	70.089	-37 40 55.77	0.23	6	70.089	3180	20154	3385	33180
14499	-33	10206	9.1	K0	14 56 04.885	0.11	4	71.795	-33 37 32.83	0.13	4	71.795				12637
14500	-14	4082	8.8	K2	56 06.172	0.04	2	70.387	-15 14 14.07	0.29	2	70.387				12638
14501	-6	4114	9.1	F0	56 14.582	-	1	72.446	-7 06 27.65	-	1	72.446				12639
14502	+0	3286	8.5	K0	56 22.359	0.32	2	71.440	-0 08 37.61	0.17	2	71.440				12640
14503	-57	6871	7.6	M0	56 26.854	0.12	4	68.842	-58 06 28.71	0.08	4	68.842				12641
14504	-70	1891	6.78	B8	14 56 29.190	0.09	6	69.823	-71 17 33.88	0.11	6	69.823	3181	20164		33181
14504	SP				56 29.141	0.21	15	71.532	-71 17 34.98	0.28	15	71.532	3181	20164		53181
14505	-9	4043	9.0	G5	56 31.976	0.44	2	71.516	-9 44 48.00	0.03	2	71.516				12642
14506	-36	9809	7.4	K0	56 34.098	0.07	4	70.566	-36 41 33.67	0.26	4	70.566				12643
14507	-1	3003	8.8	K2	56 37.425	0.10	2	70.529	-1 36 31.56	0.27	2	70.529				12644
14508	-9	4045	9.1	K0	14 56 40.447	0.08	2	71.006	-10 22 45.50	0.09	2	71.006				12645
14509	-32	10521	8.5	K5	56 47.852	0.19	4	70.271	-32 26 51.09	0.15	4	70.271				12646
14510	-59	5773	7.48	F8	56 50.575	0.16	5	69.334	-59 36 48.53	0.08	4	69.374		20172		12647
14511	-29	11454	8.6	K2	56 51.708	0.12	5	70.646	-30 09 34.44	0.21	4	70.272				12648
14512	-2	3923	8.3	F8	56 53.843	0.28	2	70.420	-2 56 32.32	0.07	2	70.420				12649
14513	-45	9573	8.8	K2	14 56 55.862	0.15	4	70.352	-45 34 52.39	0.04	4	70.352				1784
14514	-37	9849	8.4	M0	57 08.933	0.04	3	70.239	-37 40 21.65	0.24	3	70.239				12650
14515	-19	4000	8.9	F0	57 10.383	0.05	5	70.168	-19 56 58.44	0.12	5	70.168				12651
14516	-41	9366	8.5	K0	57 14.706	0.08	4	69.915	-41 43 49.37	0.13	3	70.086				1783
14517	-35	9958	9.0	K0	57 24.655	0.25	4	70.338	-35 55 14.94	0.08	4	70.338				12652
14518	-1	3004	8.6	K0	14 57 26.909	0.09	2	71.435	-1 40 27.62	0.05	2	71.435				12653
14519	-14	4085	9.0	A3	57 27.340	0.12	2	71.506	-14 31 50.40	0.07	2	71.506				12654
14520	-66	2693	8.7	K2	57 28.699	0.12	4	68.773	-67 12 05.13	0.09	4	68.773				19729
14521	-18	3945	7.9	K0	57 33.188	0.01	2	70.933	-18 25 46.46	0.05	2	70.933		20181		12655
14522	-88	127	8.11	F2	57 35.844	0.12	4	70.228	-89 08 19.17	0.18	4	70.228		20182		19730
14522	SP				14 57 35.411	0.46	4	68.774	-89 08 19.01	0.20	4	68.774		20182		19730
14523	-22	3679	8.0	M0	57 36.923	0.19	4	69.401	-22 39 05.86	0.13	4	69.401				12656
14524	-8	3884	8.4	G5	57 41.895	0.01	2	71.709	-8 56 16.89	0.29	2	71.709				12657
14525	-29	11468	8.5	G0	58 08.698	0.06	4	69.439	-29 25 54.94	0.24	4	69.439				12658
14526	-7	3938	4.8v	A0	58 17.715	0.02	141	71.953	-8 19 18.36	0.02	135	71.947	1394	20195	3388	31394

14474 10.8m, 7.1, 305°.

14526 4.8m to 5.9m.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Deci	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
14527	-45°	9592	8.7	M1	14	58	20.993	0.21	4	69.721	-45° 37'	43.05	0.08	4	69.721				1785
14528	-26	10664	8.9	F8		58	25.356	0.11	4	69.830	-26 46	10.93	0.13	4	69.830				12659
14529	-43	9552	8.7	K2		58	28.646	0.13	4	69.731	-43 43	44.49	0.10	4	69.731				1786
14530	+ 3	2966	6.81	F5		58	30.260	0.05	2	70.391	+ 3 05	42.18	0.08	2	70.391		20199		12660
14531	-46	9736	7.5	G5		58	32.361	0.12	4	69.827	-46 57	23.89	0.16	4	69.827				1787
14532*	-41	9395	8.5	K2	14	58	32.556	0.06	4	69.739	-41 37	16.96	0.17	4	69.739				1788
14533*	-63	3478	8.6	*		58	35.762	0.12	4	68.886	-63 29	25.39	0.06	4	68.886				12661
14534	-56	6545	8.1	G5		58	37.752	0.02	4	68.837	-56 25	39.02	0.22	4	68.837				12662
14535	-20	4137	9.0	G5		58	38.434	0.15	4	69.868	-20 54	45.90	0.13	4	69.868				12663
14536	+ 2	2900	8.5	G5		58	39.471	0.22	2	70.383	+ 2 03	03.14	0.14	2	70.383				12664
14537	-12	4187	8.7	K0	14	58	42.990	0.18	3	71.217	-12 28	34.55	0.05	2	70.757				12665
14538	- 2	3928	5.68	K5		58	43.808	0.07	6	69.888	- 2 33	28.56	0.05	6	69.888	3183	20202		33183
14539	-39	9465	8.7	K0		59	02.116	0.19	4	69.797	-39 43	09.67	0.09	4	69.797				12666
14540	-69	2211	8.8	K0		59	04.515	0.12	5	70.128	-69 50	29.56	0.14	5	70.128				19731
14541	-27	10183	5.87	A5		59	07.320	0.07	7	69.826	-27 51	50.30	0.03	6	69.588	3184	20209		33184
14542	+ 1	3015	8.0	F2	14	59	10.852	0.04	2	70.391	+ 0 54	39.58	0.32	2	70.391				12667
14543	-31	11654	8.1	K2		59	11.643	0.05	4	69.841	-31 23	42.22	0.09	4	69.841				12668
14544	-65	2956	8.3	F0		59	20.472	0.06	4	69.395	-65 58	46.96	0.22	4	69.395				19732
14545	- 7	3943	6.85	G5		59	23.670	0.22	2	70.456	- 8 08	55.59	0.21	2	70.456		20215	3389	12669
14546	-47	9634	6.70	K0		59	31.169	0.09	4	69.825	-47 44	45.87	0.23	3	69.965		20217		1789
14547	- 1	3008	8.5	K5	14	59	32.329	0.40	2	70.051	- 1 48	55.13	0.01	2	70.051				12670
14548	-21	4015	7.9	K0		59	37.162	0.13	4	70.324	-21 49	05.45	0.15	4	70.324				12671
14549	-24	11818	8.5	K5		59	46.741	0.10	4	70.648	-24 53	33.81	0.11	4	70.648				12672
14550	+25	2861	4.93	K5		59	54.989	0.18	6	70.363	+25 12	16.29	0.20	6	70.363	3185	20224		33185
14551	-32	10560	5.45	B3		59	55.190	0.05	6	70.903	-32 26	51.09	0.11	6	70.903	3186	20225	3391	33186
14552	- 3	3713	8.8	A0	15	00	02.411	0.08	2	71.832	- 3 42	07.87	0.13	2	71.832				12673
14553	-53	6223	8.5	K2		00	07.281	0.23	4	69.889	-53 45	47.26	0.07	4	69.889				12674
14554	-42	9945	9.0	G5		00	07.801	0.12	5	70.680	-42 53	39.14	0.05	3	69.975				1790
14555	-62	4373	8.2	K2		00	08.575	0.08	4	70.344	-63 00	28.29	0.09	4	70.344				12675
14556	- 9	4058	7.71	K0		00	09.023	0.11	2	71.392	-10 11	47.82	0.05	2	71.392		20229		12676
14557	+16	2725	6.99	G0	15	00	13.487	0.12	6	71.308	+16 14	59.37	0.13	6	71.308	3187	20231		33187
14558	+ 2	2905	4.62	K0		00	22.197	0.03	6	70.871	+ 2 17	11.86	0.11	6	70.871	3190	20237	3394	33190
14559	-53	6229	9.1	K2		00	22.263	0.15	4	70.634	-54 08	38.89	0.12	4	70.634				12677
14560	-28	11118	8.5	A0		00	26.066	0.12	4	70.586	-28 51	08.90	0.14	4	70.586				12678
14561	-52	7774	8.4	K0		00	31.305	0.21	4	70.204	-53 03	55.70	0.10	4	70.204				12679
14562	-37	9900	9.0	K0	15	00	45.142	0.13	4	69.769	-38 04	04.43	0.11	4	69.769				12680
14563	-77	1047	8.6	K0		00	45.650	0.04	5	71.115	-78 08	40.92	0.08	4	70.854				19733
14563 SP						00	45.636	0.28	4	69.822	-78 08	41.03	0.25	4	69.822				19733
14564	-16	3992	7.9	K2		00	45.744	0.17	2	71.469	-16 23	49.56	0.39	2	71.469		20248		12681
14565	+ 1	3018	7.7	K0		00	49.471	0.04	2	70.376	+ 1 05	05.75	0.18	2	70.376				12682
14566	-59	5798	8.2	K2	15	00	52.232	0.07	4	70.952	-59 36	01.46	0.13	4	70.952				12683
14567	- 2	3937	8.5	A2		00	52.239	0.10	3	71.209	- 2 58	23.63	0.15	2	70.735				12684
14568	- 6	4124	8.1	M0		00	56.860	--	1	72.266	- 7 22	35.63	--	1	72.266		20249		12685
14569*	-65	2965	9.0	F0		00	57.907	0.15	6	71.755	-66 03	02.93	0.15	5	71.678				19734
14570	-27	10196	7.73	F2		01	02.787	0.11	4	70.871	-27 52	00.49	0.11	4	70.871		20251		12686
14571	-48	9588	8.5	K0	15	01	02.814	0.18	3	69.628	-49 14	30.01	0.21	3	69.628				1791
14572	+ 4	2955	8.6	K2		01	07.434	0.13	2	72.420	+ 3 56	35.00	0.06	2	72.420				12687
14573	-24	11834	3.41	M3		01	08.123	0.02	115	71.331	-25 05	13.16	0.03	111	71.315	556	20253	3397	80556
14574	-39	9505	9.0	K0		01	12.795	0.10	4	70.751	-39 45	16.18	0.13	4	70.751				12689
14575	-59	5801	8.1	G5		01	15.925	0.26	4	70.555	-60 16	22.26	0.22	4	70.555				12690
14576	-87	235	6.52	A2	15	01	21.923	0.02	264	71.244	-87 56	54.19	0.02	254	71.216	920	20261	3399	60920
14576 SP						01	21.941	0.02	286	70.938	-87 56	54.34	0.03	283	70.938	920	20261	3399	70920
14577	-48	9591	8.5	K0		01	26.700	0.15	4	70.549	-48 59	03.08	0.14	4	70.549				1792
14578p	- 6	4125	7.8	G5		01	27.876	0.06	2	72.759	- 6 41	34.02	0.50	2	72.759		20263		12691
14579	-10	4021	8.4	K5		01	34.234	--	1	69.286	-10 49	49.35	--	1	69.286				12692
14580	-37	9916	8.3	K0	15	01	37.119	0.09	4	70.802	-37 18	47.38	0.08	4	70.802				12693
14581	-33	10274	8.7	M0		01	37.137	0.09	4	70.903	-33 25	04.32	0.11	4	70.903				12694
14582	-72	1677	9.0	K0		01	38.585	0.18	4	69.921	-72 52	20.75	0.36	4	69.921				19735
14583	-17	4246	8.3	K0		01	41.765	0.12	3	71.694	-17 42	34.28	0.18	3	71.694				12695
14584*	-46	9773	4.02	B5		01	42.109	0.16	6	71.218	-46 51	25.47	0.12	6	71.218		20271	3400	21077
14585	-76	962	8.6	K5	15	01	44.351	0.14	4	70.214	-76 21	00.21	0.09	4	70.214				19736
14585 SP						01	44.233	0.13	4	69.836	-76 21	00.21	0.26	4	69.836				19736
14586	-87	236	7.5	K0		01	44.589	0.08	5	71.092	-87 31	33.83	0.15	4	71.054				19737
14586 SP						01	44.257	0.11	4	70.287	-87 31	33.62	0.18	4	70.287				19737
14587	-30	11943	8.7	K5		01	49.620	0.07	4	70.336	-31 05	05.50	0.07	4	70.336				12696
14588	- 0	2921	7.9	A0	15	01	50.000	0.20	3	71.657	- 0 42	41.10	0.05	2	71.396		20272	3401	12697
14589	-40	9253	8.0	K2		01	55.412	0.10	4	70.610	-40 22	31.82	0.04	4	70.610				1793
14590	-14	4109	8.1	F0		01	57.929	0.21	2	71.501	-14 48	11.75	0.13	2	71.501		20275		12698
14591	- 5	4005	8.8	K0		02	05.750	0.14	3	72.940	- 5 58	53.86	0.13	3	72.940				12699
14592	-11	3874	8.6	G0		02	12.720	0.11	2	72.389	-12 12	05.75	0.41	2	72.389				12700
14593	-50	9068	9.7	G5	15	02	14.762	0.28	4	70.265	-51 15	50.18	0.09	4	70.265				1794
14594	-29	11523	7.22	K0		02	16.940	0.09	4	69.942	-29 47	47.74	0.08	4	69.942		20284		12701
14595	+27	2447	4.67	K0		02	17.816	0.06	28	71.080	+27 08	29.49	0.11	27	71.024	557	20285	3405	30557
14596	-50	9071	8.1	K0															

CATALOG OF 23,001 STARS FOR 1950.0

437

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
14598	-34	10162	8.7	K5	15	02	29.072	0.10	4	70.990	-34	20' 49.17	0.08	3	70.555				12703
14599	-61	4825	7.7	K5		02	37.349	0.17	5	70.100	-62	12' 29.75	0.12	5	70.100				12704
14600	-44	9846	8.53	K0		02	37.464	0.21	4	69.874	-44	48' 38.46	0.05	3	70.032		20288		1796
14601	-55	6356	8.2	K0		02	38.100	0.20	5	70.380	-55	37' 48.95	0.14	5	70.380				12705
14602	-25	10710	6.59	B8		02	50.771	0.09	4	70.460	-25	35' 46.24	0.18	4	70.460		20292		12706
14603	-4	3804	8.5	F0	15	02	51.347	0.04	2	70.376	-4	49' 00.72	0.56	2	70.376				12707
14604	-35	10030	8.6	K5		02	52.655	0.22	4	70.273	-35	54' 03.53	0.11	4	70.273				12708
14605	-0	2923	8.8	K0		03	02.762	0.17	2	69.904	-0	33' 13.25	0.29	2	69.904				12709
14606	-3	3725	8.8	F5		03	03.691	0.02	2	70.988	-4	10' 30.53	0.02	2	70.988				12710
14607	-29	11529	7.8	K2		03	09.122	0.19	4	69.858	-30	13' 32.60	0.18	4	69.858				12711
14608	-34	10172	8.8	A5	15	03	10.059	0.09	4	69.719	-35	12' 47.68	0.09	4	69.719				12712
14609	-88	130	7.5	K2		03	12.331	0.27	4	69.902	-88	28' 35.08	0.12	4	69.902				19738
14609 SP						03	12.497	0.12	4	68.771	-88	28' 35.16	0.13	4	68.771				19738
14610	-13	4065	9.1	K5		03	15.771	0.05	2	70.907	-14	03' 48.69	0.34	2	70.907				12713
14611	-18	3972	7.8	K0		03	24.112	0.15	3	71.665	-19	11' 04.99	0.19	2	71.875				12714
14612	-56	6582	7.43	K0	15	03	25.371	0.13	4	69.283	-57	14' 50.21	0.07	4	69.283		20302		12715
14613	+4	2964	8.1	F0		03	28.233	0.02	2	69.939	+4	25' 34.16	0.03	2	69.939				12716
14614	-52	7842	7.9	K2		03	29.935	0.13	5	70.041	-52	43' 10.74	0.15	5	70.041				12717
14615	-68	2299	8.5	M1		03	37.346	0.10	4	69.349	-68	48' 19.68	0.15	4	69.349				19739
14616	-31	11717	8.36	K5		03	43.352	0.15	4	69.717	-32	15' 31.33	0.15	4	69.717		20307		12718
14617	-12	4198	7.32	A0	15	03	49.450	0.15	2	70.406	-12	42' 52.65	0.10	2	70.406		20310	3408	12719
14618	-15	4026	5.28	K0		03	49.908	0.17	6	68.824	-16	03' 51.35	0.14	6	68.824	3193	20311		33193
14619	-26	10710	8.0	K2		03	53.106	0.09	4	70.211	-26	37' 58.73	0.09	4	70.211				12720
14620	+3	2973	8.7	G		03	53.439	0.29	2	70.007	+2	51' 15.43	0.34	2	70.007				12721
14621	-15	4028	6.63	A0		04	01.197	0.22	2	69.850	-16	17' 31.34	0.05	2	69.850		20320		12722
14622	-28	11165	8.2	F5	15	04	06.109	0.10	4	69.376	-28	37' 50.73	0.12	4	69.376				12723
14623	-1	3020	8.5	K2		04	24.805	0.17	3	70.758	-2	06' 20.90	0.18	3	70.758				12724
14624	-19	4027	8.5	K5		04	26.052	0.09	4	69.900	-20	01' 51.58	0.11	4	69.900				12725
14625	-8	3908	8.3	M0		04	28.419	0.21	2	71.389	-8	44' 12.62	0.20	2	71.389		20325		12726
14626	+5	2972	8.5	G5		04	29.428	0.16	4	71.550	+4	38' 47.26	0.31	4	71.550				12727
14627	-45	9662	8.3	K0	15	04	29.505	0.13	4	69.710	-45	29' 47.83	0.05	4	69.710				1797
14628	+2	2915	6.80	K2		04	35.163	0.22	2	71.379	+2	33' 16.36	0.13	2	71.379		20327		12728
14629	-14	4120	8.3	F2		04	38.866	0.12	2	71.402	-15	13' 29.65	0.19	2	71.402				12729
14630	-15	4032	9.0	K0		04	41.877	0.11	2	71.458	-16	12' 49.29	0.17	2	71.458				12730
14631	+0	3304	8.01	K0		04	51.098	0.15	2	71.445	+0	13' 14.55	0.27	2	71.445			3410	12731
14632	-40	9304	8.5	K2	15	04	54.338	0.08	4	69.830	-40	38' 40.11	0.22	3	69.972				1798
14633	-36	9923	8.4	K0		04	55.990	0.17	4	69.772	-36	21' 43.82	0.11	4	69.772				12732
14634	-40	9305	6.01	A0p		04	56.934	0.08	6	69.786	-40	23' 32.98	0.03	6	69.786	3194	20335		33194
14635	-58	5825	6.96	K0		04	59.043	0.16	4	69.310	-58	57' 04.35	0.20	4	69.310		20338		12733
14636	-66	2725	5.80	F8p		05	01.357	0.16	6	69.466	-66	53' 36.78	0.08	6	69.466	3195	20339	3411	33195
14637	-63	3516	8.3	K0	15	05	01.453	0.08	4	69.414	-63	19' 30.44	0.13	4	69.414				12734
14638	+25	2873	5.03	F0		05	06.487	0.05	48	71.423	+25	03' 42.81	0.06	47	71.398	1396	20342	3414	31396
14639	-73	1473	9.8	G5		05	08.133	0.04	4	72.017	-74	14' 08.00	0.14	4	72.017				19740
14640	+6	3001	6.22	G5		05	11.306	0.07	7	70.208	+5	41' 21.94	0.09	6	70.034	3196	20346	3415	33196
14641	-28	11175	8.6	A5		05	19.893	0.15	4	70.555	-28	24' 28.65	0.10	4	70.555				12735
14642	-42	10050	6.00	B5	15	05	20.436	0.09	6	70.709	-42	40' 37.11	0.06	6	70.709		20350		12078
14643	-11	3881	7.60	G5		05	22.629	0.10	2	69.853	-11	51' 35.66	0.07	2	69.853		20353		12736
14644	-54	6352	8.3	M0		05	22.772	0.12	4	69.804	-54	44' 10.53	0.07	4	69.804				12737
14645*	-44	9889	4.39	B3		05	27.862	0.06	6	70.953	-45	05' 20.58	0.10	6	70.953		20356		21079
14646	-21	4036	8.5	K2		05	28.168	0.11	4	69.628	-21	54' 23.93	0.07	4	69.628				12738
14647	-3	3730	7.5	K2	15	05	28.951	0.07	2	71.015	-3	33' 57.34	0.31	2	71.015				12739
14648	-56	6596	8.14	K0		05	34.527	0.11	4	69.910	-56	52' 35.57	0.14	4	69.910		20361		12740
14649	+1	3029	8.8	K0		05	35.181	0.15	2	69.928	+1	29' 58.08	0.10	2	69.928				12741
14650*	-50	9118	9.0	G5		05	35.353	0.12	5	70.918	-50	40' 10.40	0.10	5	70.918				1799
14651	-61	4841	7.9	K5		05	36.869	0.20	4	69.930	-61	17' 48.78	0.25	4	69.930				12742
14652	-60	5650	8.1	K2	15	05	46.177	0.13	4	69.895	-60	33' 01.92	0.13	4	69.895				12743
14653	-35	10067	6.96	K0		05	50.129	0.15	4	69.800	-36	14' 32.17	0.18	4	69.800		20364		12744
14654	-79	806	8.3	K5		05	53.666	0.07	5	71.071	-79	31' 47.33	0.07	4	70.798				19741
14654 SP						05	53.631	0.17	4	69.614	-79	31' 47.52	0.14	4	69.614				19741
14655	-20	4157	8.1	K2		05	55.360	0.10	4	70.133	-20	30' 14.33	0.16	4	70.133				12745
14656	-24	11878	8.4	F8	15	06	02.382	0.06	4	69.966	-24	51' 48.42	0.17	4	69.966				12746
14657	-27	10236	7.7	A3		06	04.581	0.09	4	69.874	-28	10' 20.36	0.07	4	69.874				12747
14658	-67	2773	8.6	G5		06	05.131	0.31	4	69.758	-67	23' 13.00	0.26	4	69.758				19742
14659	-32	10624	8.2	M0		06	09.649	0.09	4	69.823	-32	38' 43.27	0.05	4	69.823				12748
14660	-13	4081	7.42	F0		06	16.633	0.29	2	70.385	-13	48' 34.31	0.06	2	70.385		20368		12749
14661	-5	4018	8.5	G5	15	06	17.172	0.20	2	70.388	-5	26' 06.59	0.15	2	70.388				12750
14662	-25	10743	8.5	G5		06	23.796	0.09	4	70.363	-25	29' 28.21	0.04	4	70.363				12751
14663	-85	429	8.7	G5		06	24.922	0.14	5	71.770	-85	29' 39.20	0.19	5	71.770				19743
14663 SP						06	24.890	0.20	4	70.820	-85	29' 38.85	0.38	4	70.820				19743
14664	-44	9903	8.5	K0		06	30.199	0.04	6	70.349	-44	27' 47.59	0.10	5	70.327				1800
14665	-48	9676	8.0	G5	15	06	49.814	0.17	4	69.831	-48	48' 23.27	0.24	4	69.831				1801
14666	-29	11560	8.5	F8		06	50.043	0.11	4	69.320	-29	38' 51.83	0.06	4	69.320				12752
14667	-43	9671	8.8	K5		06	54.197	0.18	4	70.914	-43	50' 54.77	0.10	4	70.914				1802
14668	-7	3968	8.1	K0		06	55.727	0.07	2	70.413	-7								

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
14670	-47 9749	8.2	K5	15 07 03.235	0.12	4	70.910	-47 25' 21.61	0.02	4	70.910				1803
14671	-41 9563	8.70	G5	07 04.346	0.05	4	71.039	-41 18 17.62	0.09	4	71.039	20387			1804
14672	+ 4 2971	8.2	K0	07 16.990	0.10	2	70.555	+ 3 53 51.39	0.06	2	70.555				12755
14673	-17 4263	8.7	K2	07 21.769	0.04	2	69.937	-17 52 03.77	0.00	2	69.937				12756
14674	- 0 2936	7.68	F0	07 23.951	0.20	2	71.463	- 0 41 26.16	0.05	2	71.463			3422	12757
14675	-54 6367	5.56	G5	15 07 31.361	0.06	5	68.811	-55 09 26.18	0.12	6	68.811	3198	20395		33198
14676	-52 7934	7.1	K0	07 31.581	0.17	4	69.306	-52 20 50.71	0.14	4	69.306				12758
14677	-34 10220	9.0	F5	07 33.769	0.13	5	70.661	-34 51 47.31	0.13	3	70.584				12759
14678	-38 10025	8.0	K2	07 34.552	0.05	4	70.811	-38 33 05.04	0.12	3	70.317				12760
14679	-64 3113	8.6	G5	07 37.223	0.11	4	69.814	-64 47 01.04	0.18	4	69.814				19744
14680	-35 10091	9.0	K0	15 07 46.345	0.18	4	70.680	-35 37 28.82	0.15	4	70.680				12761
14681	-21 4048	8.34	F0	08 11.262	0.19	4	69.913	-21 53 20.40	0.19	4	69.913	20404			12762
14682	-49 9387	8.2	K0	08 17.512	0.16	4	70.822	-49 27 00.16	0.07	4	70.822				1805
14683	-42 10097	8.7	K0	08 21.247	0.03	4	70.684	-43 02 55.04	0.03	4	70.684				1806
14684	-16 4020	8.5	A0	08 22.913	0.05	2	70.725	-16 46 34.95	0.45	2	70.725				12763
14685	-46 9864	8.0	M0	15 08 24.336	0.14	5	71.417	-46 33 49.45	0.09	5	71.417				1807
14686	-26 10749	8.9	K2	08 25.125	0.05	4	70.542	-27 08 06.23	0.09	4	70.542				12764
14687	-48 9704	4.14	B9	08 26.550	0.03	90	71.500	-48 32 58.27	0.03	88	71.472	1398	20409	3423	31398
14688	- 3 3740	8.4	F5	08 28.208	0.07	3	72.558	- 3 22 44.14	0.19	2	72.748				12765
14689	-12 4214	7.54	K0	08 28.444	0.01	2	71.809	-12 51 57.95	0.39	2	71.809	20413			12766
14690	-31 11774	9.23	K0	15 08 28.460	0.12	4	71.268	-31 56 35.96	0.04	3	70.604	20412			12767
14691	-70 1973	8.4	K2	08 31.257	0.07	4	70.336	-70 29 08.65	0.19	4	70.336				19745
14692	-36 9968	8.6	K2	08 32.816	0.12	4	71.284	-37 05 02.41	0.26	4	71.284				12768
14693	-38 10042	9.0	K0	08 33.684	0.02	4	71.298	-39 10 54.99	0.15	4	71.298				12769
14694	-68 2332	9.1	A2	08 37.019	0.10	4	71.313	-69 15 46.10	0.21	4	71.313				19746
14695	-10 4050	8.9	K0	15 08 38.024	0.13	2	70.866	-10 52 04.43	0.21	2	70.866				12770
14696	-20 4164	9.1	F5	08 40.035	0.19	5	70.954	-21 07 20.24	0.24	5	70.954				12771
14697	-51 8830	3.50	K0	08 40.472	0.06	16	70.013	-51 54 39.52	0.06	16	70.013	558	20418	3425	30558
14698	-65 3002	8.9	K0	08 47.958	0.10	4	71.681	-65 31 09.60	0.19	4	71.681				19747
14699	-75 1122	7.5	K2	08 58.511	0.13	4	70.818	-75 21 47.63	0.27	4	70.818				19748
14699 SP	+ 3 2992	7.9	A5	15 08 58.528	0.36	4	70.120	-75 21 46.85	0.48	4	70.120				19748
14700	- 4 4140	8.8	K0	08 58.730	0.00	2	70.784	+ 3 00 59.11	0.19	2	70.784	20423			12772
14701	-14 4140	8.8	K0	09 01.166	0.03	2	73.241	-15 02 37.02	0.00	2	73.241				12773
14702*	-36 9973	9.1	F5	09 04.205	0.06	4	70.962	-37 08 51.05	0.18	4	70.962				12774
14703	- 8 3918	7.9	K5	09 10.248	0.16	2	72.935	- 8 39 08.11	0.38	2	72.935				12775
14704	-18 3997	6.77	K0	15 09 21.289	0.26	2	72.932	-18 55 07.90	0.17	2	72.932		20432		12776
14705	-19 4047	4.66	A0p	09 21.893	0.02	42	71.232	-19 36 14.48	0.03	40	71.232	559	20433	3427	80559
14706	-51 8844	7.5	K2	09 22.350	0.12	4	71.168	-51 47 07.89	0.18	4	71.168				1808
14707	-30 12030	8.9	--	09 26.175	0.13	4	70.761	-30 38 21.22	0.22	4	70.761				12777
14708	-44 9932	4.92	B3	09 27.386	0.13	4	72.249	-44 18 47.10	0.34	3	72.233		20435		21080
14709	- 6 4154	8.7	A5	15 09 33.985	0.07	3	73.422	- 6 35 59.03	0.01	2	73.425				12778
14710	-15 4050	7.8	K2	09 38.801	0.09	2	73.388	-15 31 40.63	0.21	2	73.388				12779
14711	+ 4 2977	8.30	F5	09 41.541	0.03	2	73.358	+ 4 30 34.88	0.11	2	73.358		20440		12780
14712	-55 6428	7.53	G0	09 42.962	0.08	4	71.320	-55 32 41.72	0.27	4	71.320		20441		12781
14713	+19 2935	5.98	M3	09 47.611	0.10	6	71.674	+19 09 47.30	0.19	6	71.674	3199	20442		33199
14714	+ 0 3318	7.2	K5	15 10 03.441	0.22	2	72.799	- 0 11 40.96	0.14	2	72.799				12782
14715	-32 10672	8.5	K0	10 03.664	0.12	4	71.356	-33 08 18.59	0.12	4	71.356				12783
14716	-43 9710	8.8	K2	10 04.286	0.13	4	71.697	-44 09 22.12	0.35	4	71.697				1809
14717	-76 994	7.28	K0	10 09.467	0.15	5	71.785	-77 10 08.26	0.23	4	71.922		20450		19749
14717 SP				10 09.430	0.14	4	70.387	-77 10 08.12	0.26	4	70.387		20450		19749
14718	-67 2799	8.2	G5	15 10 14.323	0.12	5	71.287	-67 54 10.91	0.13	5	71.287				19750
14719	-63 3536	7.7	K0	10 20.238	0.14	4	70.433	-63 26 39.85	0.12	4	70.433				12785
14720	- 9 4090	8.6	F8	10 22.290	--	1	71.441	- 9 38 29.04	--	1	71.441				12786
14721	-71 1773	8.0	M1	10 28.112	0.16	4	70.097	-72 12 47.33	0.07	4	70.097				19751
14722	-10 4055	6.54	A2	10 31.498	0.04	2	72.912	-10 49 13.49	0.69	2	72.912		20460		12788
14723	- 4 3832	8.0	A3	15 10 32.771	0.10	2	71.448	- 4 28 45.60	0.27	2	71.448				12789
14724	-42 10143	7.99	G5	10 33.899	0.13	4	70.051	-43 10 14.06	0.05	4	70.051		20462		1810
14725	+ 2 2928	8.9	K	10 37.305	0.08	2	73.406	+ 2 03 58.78	0.30	2	73.406				12790
14726	-22 3916	8.4	A2	10 50.813	0.04	4	70.435	-23 21 16.95	0.14	4	70.435				12791
14727	-52 8024	8.8	K0	10 52.320	0.14	4	70.891	-52 27 00.27	0.26	4	70.891				12792
14728	-53 6361	8.1	K0	15 10 55.427	0.12	4	70.439	-54 13 15.30	0.11	4	70.439				12794
14729	-23 12144	7.82	G5	10 57.696	0.19	4	71.285	-24 11 33.78	0.26	4	71.285		20468		12795
14730	-40 9417	8.9	G5	10 58.530	0.05	4	71.084	-40 21 14.92	0.06	4	71.084				1811
14731	-27 10274	8.9	A0	11 00.567	0.15	4	71.601	-27 21 13.64	0.15	4	71.601				12796
14732	-13 4107	7.9	G5	11 01.031	0.20	2	70.785	-13 50 13.06	0.25	2	70.785				12797
14733	-69 2281	6.68	F0	15 11 05.119	0.07	6	71.028	-70 13 42.03	0.16	5	70.983	3200	20470		33200
14734	-35 10135	9.3	K5	11 08.394	0.09	4	71.654	-36 01 45.18	0.28	4	71.654				12799
14735	+23 2789	6.25	A0	11 19.177	0.10	6	71.446	+23 10 06.37	0.16	6	71.446	3201	20474		33201
14736	- 1 3035	9.0	K5	11 23.785	0.09	2	70.400	- 1 23 51.94	0.49	2	70.400				12800
14737	-21 4056	9.0	K0	11 27.504	0.13	4	71.063	-22 17 03.68	0.20	4	71.063				12801
14738	-48 9750	8.0	K0	15 11 30.000	0.06	5	71.919	-48 33 43.83	0.07	4	71.854				1812
14739	-31 11813	4.95	F0	11 33.089	0.08	12	70.896	-31 20 01.79	0.05	11	70.768	1399	20480	3428	31399
14740	+ 2 2933	9.0	F2	11 34.640	0.19	2	70.396	+ 1 54 35.70	0.17	2	70.396				12802
14741	-15 4059	8.8	A5	11 39.456	--	1	73.425	-15 49 08.41	--	1	73.425				12803
14742	-28 11238	8.3	G5	11 40.394	0.17	4	71.391	-28 53 23.01	0.09	4	71.391				12804

14702 9.8m-9.9m, 0°9, 303°.

CATALOG OF 23,001 STARS FOR 1950.0

439

No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
14743	-59	5871	7.8	K2	15	11	44.483	0.18	4	69.863	-60 02 49.10	0.18	4	69.863					12806
14744	-38	10105	8.7	K0		11	47.619	0.15	3	70.583	-39 14 53.44	0.08	3	70.583					12807
14745	-2	3960	7.16	A0		11	52.069	0.04	2	72.856	-3 10 45.32	0.16	2	72.856		20486			12808
14746	+3	3001	8.8	F0		11	56.016	--	1	69.280	+3 24 10.99	--	1	69.280					12809
14747	-78	972	7.03	F0		11	56.678	0.10	6	70.438	-78 17 19.89	0.18	6	70.438	3203	20487	3429		33203
14747	SP				15	11	56.633	0.13	6	69.965	-78 17 19.70	0.15	6	69.965	3203	20487	3429		53203
14748	-56	6651	8.3	K2		11	58.250	0.12	4	70.894	-56 49 45.00	0.08	4	70.894					12810
14749	-6	4160	8.4	A0		12	02.170	0.04	2	73.377	-7 17 19.14	0.06	2	73.377					12811
14750	-5	4038	8.7	K0		12	17.611	0.03	2	73.374	-5 44 10.45	0.25	2	73.374					12812
14751	-24	11951	8.5	K2		12	19.480	0.15	4	71.172	-25 12 17.19	0.15	4	71.172					12813
14752	-1	3041	8.2	M1	15	12	21.885	0.03	2	71.954	-2 13 47.51	0.13	2	71.954					12814
14753	+29	2640	5.26	A0		12	23.507	0.15	6	71.274	+29 20 56.26	0.16	6	71.274	3204	20495			33204
14754	-32	10692	9.3	K5		12	27.877	0.49	4	71.459	-33 06 22.79	0.33	4	71.459					12815
14755	-0	2946	8.5	A0		12	32.731	--	1	72.478	-0 59 21.57	--	1	72.478					12816
14756	-46	9909	8.0	K5		12	37.118	0.08	4	71.137	-46 26 27.76	0.08	4	71.137					1813
14757	-53	6385	9.1	G0	15	12	38.745	0.11	3	70.371	-53 57 00.21	0.11	3	70.371					12817
14758*	-27	10292	6.78	F2		12	39.574	0.05	4	71.383	-27 24 43.59	0.13	4	71.383		20500			12818
14759	-34	10276	8.7	G5		12	39.886	0.15	5	71.813	-34 37 08.20	0.07	4	71.727					12819
14760	-10	4063	8.0	A2		12	40.189	0.05	2	73.414	-11 15 45.26	0.05	2	73.414					12820
14761	+5	2985	5.44	K0		12	42.027	0.06	11	71.072	+5 07 25.91	0.14	10	70.965	562	20501	3432		30562
14762	-55	6461	8.1	K2	15	12	44.470	0.09	4	70.631	-55 25 36.77	0.17	4	70.631					12821
14763	-16	4039	9.2	G0		12	45.032	--	1	72.459	-16 45 01.38	--	1	72.459					12822
14764	-26	10783	8.0	F2		12	54.095	0.14	4	69.956	-26 50 18.51	0.24	4	69.956					12823
14765	-37	10097	8.1	M0		12	56.398	0.14	4	70.884	-37 19 02.72	0.16	4	70.884					12824
14766	-14	4160	8.4	B3		12	58.420	0.35	2	72.286	-14 30 30.91	0.26	2	72.286					12825
14767	-47	9835	7.70	K0	15	13	05.757	0.02	4	70.398	-47 30 47.70	0.20	4	70.398		20510			1814
14768	-31	11829	9.1	K2		13	08.829	0.08	4	71.076	-31 38 46.31	0.09	4	71.076					12826
14769	-50	9230	8.0	K2		13	14.147	0.16	4	71.106	-50 51 50.60	0.06	4	71.106					1815
14770	-32	10706	8.7	G0		13	21.137	0.27	2	69.873	-32 28 10.04	0.00	2	69.873					12827
14771	-65	3017	9.1	K0		13	21.511	0.09	4	71.358	-65 35 35.73	0.26	4	71.358					19752
14772	-63	3544	4.84	K0	15	13	24.048	0.05	6	70.700	-63 25 38.79	0.07	6	70.700	3205	20519	3433		33205
14773	-6	4164	8.2	A0		13	24.528	0.08	3	73.049	-6 33 09.26	0.17	3	73.049					12828
14774	+1	3052	7.10	K0		13	25.822	0.25	2	72.051	+0 58 52.32	0.06	2	72.051		20520			12829
14775	-57	6980	7.7	K2		13	26.341	0.03	4	70.854	-58 11 04.66	0.21	4	70.854					12830
14776	-21	4065	5.71	K2		13	28.707	0.13	6	70.353	-22 12 56.81	0.08	6	70.353	3206	20522			12831
14777	-18	4017	8.2	K2	15	13	29.135	0.07	2	72.289	-18 26 42.87	0.21	2	72.289					12832
14778	-58	5875	4.16	A3		13	34.604	0.03	37	70.866	-58 37 01.27	0.04	37	70.866	561	20526	3436		30561
14779	-39	9704	8.6	K2		13	45.765	0.10	5	71.450	-39 45 39.22	0.14	4	71.276					12833
14780	-19	4063	8.7	F5		13	53.208	0.26	2	70.871	-19 49 03.70	0.00	2	70.871					12834
14781	-29	11624	9.2	K0		13	54.802	0.08	4	69.924	-30 11 02.75	0.10	4	69.924					12835
14782	-8	3934	8.4	F2	15	13	55.060	0.12	3	71.376	-9 01 16.62	0.19	3	71.376					12836
14783	-41	9708	8.0	M0		13	58.594	0.14	4	70.800	-41 44 38.25	0.17	3	70.302					1816
14784	-36	10030	9.0	M0		14	11.225	0.15	4	71.031	-36 23 26.86	0.24	4	71.031					12837
14785	-68	2383	3.06	A0		14	12.239	0.04	50	71.262	-68 29 49.59	0.05	49	71.262	560	20538	3438		30560
14786	-14	4165	8.7	K0		14	12.724	0.04	2	71.855	-14 24 54.94	0.20	2	71.855					12838
14787	-51	8936	8.5	K0	15	14	14.360	0.16	4	71.036	-52 06 13.63	0.15	4	71.036					1817
14788	-8	3935	2.74	B8		14	18.591	0.03	80	71.050	-9 11 59.30	0.03	74	70.950	564	20539	3439		80564
14789	-45	9805	7.42	K5		14	22.539	0.13	4	70.652	-45 31 56.49	0.15	4	70.652		20542			1818
14790	-3	3757	7.3	F0		14	38.430	0.13	2	72.705	-4 00 05.64	0.40	2	72.705					12839
14791	-29	11630	4.43	K0		14	46.875	0.15	7	70.854	-29 57 58.66	0.15	6	70.788	3207	20550			33207
14792	-44	10003	8.9	K5	15	14	47.073	0.04	4	70.265	-44 36 40.53	0.06	4	70.265					1819
14793	-9	4112	7.5	F0		14	49.145	0.15	2	70.861	-10 19 04.49	0.22	2	70.861					12840
14794	-73	1516	8.6	K2		14	55.516	0.14	4	70.591	-73 49 40.40	0.13	4	70.591					19753
14795	-24	11978	8.5	A2		14	56.082	0.14	4	70.468	-24 47 58.76	0.15	4	70.468					12841
14796	-57	6995	8.0	M0		15	04.892	0.09	4	70.188	-57 21 32.99	0.25	4	70.188					12842
14797	-0	2948	7.28	G5	15	15	05.914	0.09	2	70.437	-0 48 10.02	0.15	2	70.437		20558			12843
14798	-23	12191	8.6	K5		15	07.036	0.20	4	70.229	-23 17 22.99	0.10	4	70.229					12844
14799	-62	4445	8.8	G5		15	10.809	0.05	4	70.667	-62 36 30.87	0.15	4	70.667					12845
14800	+4	2993	8.3	K5		15	12.146	0.06	2	72.344	+3 57 37.08	0.17	2	72.344					12846
14801	-81	697	8.2	K5		15	14.556	0.07	4	70.252	-81 42 19.72	0.15	4	70.252					19754
14801	SP				15	15	14.600	0.14	4	69.629	-81 42 19.09	0.24	4	69.629					19754
14802	-74	1369	8.2	K2		15	18.884	0.17	5	71.318	-74 32 25.30	0.02	5	71.318					19755
14803	-20	4198	8.4	K2		15	26.848	0.02	4	70.749	-20 40 44.31	0.11	4	70.749					12847
14804	+1	3057	9.0	K		15	32.646	0.14	3	72.297	+0 59 25.86	0.14	2	72.367					12848
14805	-68	2393	8.6	K0		15	34.286	0.14	4	70.405	-68 25 20.95	0.18	4	70.405					19756
14806	-12	4232	8.3	K0	15	15	39.418	0.23	2	71.949	-12 44 34.87	0.28	2	71.949					12849
14807	-9	4116	8.6	G5		15	49.172	--	1	72.192	-9 36 08.82	--	1	72.192					12850
14808	+1	3059	6.72	K0		15	49.709	0.07	2	71.930	+1 07 16.11	0.17	2	71.930		20569			12851
14809	-40	9501	8.2	G5		15	54.179	0.22	4	69.865	-41 08 02.12	0.10	4	69.865					1820
14810	-7	3999	7.60	K0		15	54.187	0.17	2	71.470	-8 12 56.60	0.51	2	71.470			3444		12852
14811	-51	8970	8.5	F5	15	15	54.386	0.13	4	70.549	-51 34 41.83	0.10	4	70.549					1821
14812	-48	9829	9.2	K0		15	56.412	0.06	5	71.402	-48 19 37.36	0.15	4	71.216					1822
14813	-49	9521	8.5	K2		15	57.799	0.15	4	71.070	-49 26 27.73	0.11	4	71.070					1823
14814	-2	3972	8.0	F8		16	02.660	0.01	2	70.392	-2 37 08.06	0.15	2	70.392					12853
14815*	-67	2																	

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
14816	+21	2755	5.66	G5	15 16 09.856	0.09	9	72.131	+20 45 15.48	0.09	9	72.131	1400	20575	3445	31400
14817	-35	10202	8.5	K5	16 10.725	0.08	5	71.089	-35 31 27.52	0.13	4	70.787				12854
14818	-37	10134	8.7	K0	16 13.481	0.12	4	70.512	-37 23 35.85	0.15	4	70.512				12855
14819	-64	3143	8.6	G0	16 14.056	0.14	5	71.141	-64 16 51.84	0.25	4	70.882				19757
14820	-69	2315	7.8	K0	16 16.166	0.18	4	69.901	-69 48 29.00	0.10	4	69.901				19758
14821	-61	4900	8.8	K0	15 16 17.015	0.07	3	69.805	-61 55 25.63	0.18	3	69.805				12856
14822	+10	2823	6.71	F8	16 17.736	0.08	17	71.324	+10 36 32.17	0.11	16	71.245	1401	20579	3446	31401
14823	-7	4001	8.5	K2	16 18.038	0.22	2	71.436	-7 43 23.70	0.16	2	71.436				12857
14824	-28	11280	7.8	G5	16 18.104	0.16	4	69.459	-28 47 35.38	0.04	4	69.459				12858
14825	-56	6696	6.89	M3	16 20.141	0.07	4	69.876	-57 13 01.80	0.14	4	69.876		20582		12859
14826	-18	4034	7.80	A2	15 16 35.436	0.16	2	70.376	-18 59 17.55	0.23	2	70.376			3447	12860
14827	-26	10812	8.1	K5	16 37.951	0.05	4	69.902	-26 34 26.60	0.08	4	69.902				12861
14828*	-23	12208	7.21	F2	16 43.846	0.12	4	69.412	-24 05 20.99	0.26	4	69.412		20589		12862
14829	-70	2017	9.3	G0	16 48.956	0.36	4	70.690	-70 57 58.99	0.32	4	70.690				19759
14830	-29	11638	8.7	G0	16 53.410	0.09	4	70.330	-29 55 34.43	0.17	4	70.330				12863
14831	-32	10738	7.8	F2	15 16 56.112	0.14	4	70.499	-32 41 03.89	0.13	4	70.499				12864
14832	-55	6510	8.4	K2	17 03.057	0.09	4	70.211	-56 06 49.77	0.18	4	70.211				12865
14833	-30	12138	8.6	F8	17 08.166	0.07	4	69.369	-30 39 23.71	0.13	4	69.369				12866
14834	-42	10282	8.5	G5	17 08.194	0.05	4	70.633	-42 23 33.69	0.11	4	70.633				1824
14835	-38	10204	8.9	K0	17 10.886	0.10	4	70.899	-39 04 55.14	0.04	4	70.899				12867
14836	+3	3009	8.3	F5	15 17 12.294	0.21	2	70.374	+3 30 44.03	0.06	2	70.374				12868
14837	-39	9759	8.8	K5	17 17.350	0.08	4	70.923	-39 39 08.72	0.14	4	70.923				12869
14838	-12	4238	8.4	F0	17 23.780	0.03	2	70.421	-13 00 41.28	0.35	2	70.421				12870
14839	-60	5749	8.4	K5	17 24.638	0.19	5	70.324	-60 42 37.03	0.08	5	70.324				12871
14840	-43	9816	9.0	K2	17 24.740	0.08	4	70.901	-44 02 56.38	0.18	4	70.901				1825
14841	-25	10881	7.19	K0	15 17 42.907	0.14	4	70.294	-25 48 33.82	0.12	4	70.294		20611		12872
14842	-10	4085	8.5	A0	17 47.574	0.04	2	69.961	-10 51 10.59	0.15	2	69.961		20612		12873
14843	-15	4082	8.8	K0	17 52.929	0.03	2	70.555	-16 14 48.91	0.03	2	70.555				12874
14844	-32	10751	9.2	K5	17 56.124	0.21	4	70.912	-33 10 57.80	0.17	4	70.912				12875
14845	-4	3866	6.68	K0	17 58.181	0.04	2	71.406	-4 56 24.70	0.07	2	71.406		20616	3449	12876
14846	-2	3977	8.7	K2	15 18 02.082	0.04	2	70.394	-3 20 24.24	0.32	2	70.394				12877
14847	-17	4312	6.20	K0	18 03.227	0.25	2	71.454	-17 58 43.44	0.20	2	71.454		20618		12878
14848	-40	9538	3.43	B2	18 04.815	0.03	80	71.718	-40 28 05.25	0.04	77	71.700	1402	20620	3450	31402
14849	-63	3565	8.5	G5	18 07.423	0.10	4	69.353	-63 56 59.35	0.16	4	69.353				12879
14850	-14	4182	7.50	K0	18 09.445	0.17	2	71.495	-15 11 39.88	0.42	2	71.495		20623		12880
14851	-46	9981	9.2	K2	15 18 11.272	0.18	4	71.320	-46 38 08.67	0.17	4	71.320				1826
14852	-1	3047	6.50	K2	18 11.648	0.25	2	71.491	-2 13 57.59	0.00	2	71.491		20626	3451	12881
14853	-58	5896	8.2	A2	18 12.366	0.18	4	69.343	-58 40 42.41	0.11	4	69.343				12882
14854	-17	4314	8.8	G5	18 26.907	--	1	71.581	-18 02 19.47	--	1	71.581				12883
14855	-72	1766	9.1	K2	18 28.412	0.15	4	68.821	-72 17 55.80	0.03	4	68.821				19760
14856	-5	4057	5.60	K2	15 18 28.795	0.10	6	69.198	-5 38 44.30	0.11	6	69.198	3209	20636		33209
14857	-6	4181	7.43	K2	18 29.715	0.50	2	70.967	-6 26 01.08	0.18	2	70.967		20638	3454	12884
14858	+0	3348	8.0	G5	18 33.067	0.12	2	71.415	-0 03 08.07	0.44	2	71.415				12885
14859	-35	10236	3.59	K5	18 37.353	0.06	24	70.929	-36 04 54.89	0.08	22	70.797	566	20643	3455	30566
14860	-47	9922	5.06	F8	18 38.288	0.11	6	70.123	-47 44 53.04	0.24	6	70.123	3211	20644	3456	33211
14861	-34	10333	9.0	K5	15 18 43.646	0.24	4	70.655	-34 33 47.15	0.08	4	70.655				12886
14862	-4	3868	9.1	K0	18 54.160	0.25	2	69.906	-5 03 50.67	0.24	2	69.906				12887
14863	-31	11895	9.0	F5	18 57.655	0.12	4	69.888	-31 21 26.61	0.10	4	69.888				12888
14864	-49	9569	9.4	F2	19 08.423	0.24	4	71.154	-49 52 13.35	0.12	4	71.154				2870
14865*	-44	10066	3.74	B3	19 16.480	0.12	6	72.027	-44 30 41.02	0.10	6	72.027		20659		21082
14866	-36	10095	8.0	K0	15 19 17.634	0.16	4	70.596	-36 51 01.00	0.05	4	70.596				12889
14867	-5	4060	8.6	K2	19 32.852	0.18	2	71.474	-5 25 37.39	0.38	2	71.474				12890
14868	-29	11658	9.1	K0	19 42.489	0.13	4	70.359	-30 13 32.78	0.22	4	70.359				12891
14869	-65	3043	8.8	F8	19 44.422	0.24	4	69.394	-66 13 59.91	0.15	4	69.394				19761
14870	-6	4189	8.8	G5	19 46.332	0.00	2	70.435	-7 07 44.03	0.07	2	70.435				12892
14871	-36	10103	4.69	B3	15 19 57.137	0.05	26	71.401	-36 40 50.82	0.06	26	71.401	1403	20676	3459	31403
14872	-56	6729	6.70	K0	19 57.204	0.10	7	70.693	-57 09 12.22	0.12	6	70.599	3212	20677	3460	33212
14873	-26	10842	6.78	K0	19 57.478	0.03	46	71.203	-26 30 40.33	0.05	44	71.152	1404	20678	3461	31404
14874	+13	2928	6.20	A0	20 01.011	0.13	6	70.716	+12 44 43.42	0.23	6	70.716	3213	20681		33213
14875	-49	9580	9.0	K0	20 02.318	0.13	4	71.170	-49 36 19.37	0.12	4	71.170				1827
14876	-35	10251	8.9	K0	15 20 02.360	0.10	5	71.249	-36 00 04.18	0.09	4	71.022				12893
14877	-1	3051	8.5	K2	20 04.382	0.07	2	70.763	-1 21 29.08	0.10	2	70.763				12894
14878	-75	1151	8.3	K0	20 05.184	0.18	4	70.351	-75 46 12.98	0.17	4	70.351				19762
14878	SP				20 05.093	0.39	4	69.607	-75 46 12.13	0.34	4	69.607				19762
14879	+1	3071	8.7	K0	20 10.829	0.25	2	70.865	+1 35 56.91	0.08	2	70.865		20682		12895
14880	-8	3962	8.4	G0	15 20 11.915	0.05	2	71.829	-8 56 53.77	0.44	2	71.829				12897
14881	-31	11910	7.5	K5	20 11.966	0.08	4	70.811	-32 08 09.97	0.13	3	70.316				12896
14882	+2	2952	8.6	F5	20 12.442	0.09	2	72.388	+2 22 31.59	0.07	2	72.388				12898
14883	-41	9832	9.0	F0	20 12.824	0.08	4	70.894	-42 08 29.37	0.07	4	70.894				1828
14884	-14	4188	6.74	K2	20 14.171	0.04	38	71.885	-14 57 24.20	0.05	38	71.885	1405	20683	3462	31405
14885	-66	2772	7.8	K0	15 20 17.900	0.12	4	69.820	-66 49 12.57	0.09	4	69.820				19763
14886	-10	4092	8.5	K5	20 21.792	0.09	2	70.768	-11 16 38.63	0.02	2	70.768				12899
14887	-50	9351	9.0	K0	20 22.280	0.07	4	69.419	-50 41 50.08	0.18	4	69.419				1829
14888	-59	5956	8.4	K2	20 26.734	0.18	4	69.907	-59 34 29.95	0.20	4	69.907				12900
14889	-44	10088	8.41	K0	20 26.933	0.16	5	70.988	-44 46 42.36	0.18	4	70.698		20687		1830

14828 A 9586, 7.9m-8.1m, 0°7', 276°.

14865 SDS, 3.9m-5.6m, 0°6', 247°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
14890	-9	4133	7.9	G5	15 20 27.911	0.44	2	72.262	-10 18 31.25	0.15	2	72.262				12901
14891	+0	3349	7.6	K0	20 28.250	0.06	2	71.779	+0 38 30.26	0.25	2	71.779				12902
14892	-45	9887	9.0	K0	20 31.753	0.03	4	70.889	-45 31 22.22	0.14	4	70.889				1831
14893	-2	3985	8.6	K0	20 34.122	0.06	3	72.923	-3 05 25.32	0.22	2	73.295				12903
14894	+4	3009	8.9	A3	20 34.514	0.04	2	72.878	+3 47 26.19	0.42	2	72.878				12904
14895	-76	1025	8.6	K5	15 20 35.463	0.16	4	70.450	-76 30 53.97	0.10	4	70.450				19764
14895	SP				20 35.531	0.28	4	69.829	-76 30 53.62	0.27	4	69.829				19764
14896	-52	8265	7.4	K0	20 38.772	0.11	5	70.939	-52 32 20.03	0.12	5	70.939				12905
14897	-78	994	7.72	K2	20 40.448	0.08	6	71.173	-79 07 52.98	0.17	4	71.138	20689			19765
14897	SP				20 40.569	0.32	4	70.018	-79 07 52.50	0.20	4	70.018	20689			19765
14898	-16	4070	7.60	K0	15 20 41.848	0.02	2	71.927	-16 23 13.02	0.48	2	71.927			3463	12906
14899	-47	9950	8.0	K0	20 51.441	0.10	4	70.842	-47 41 22.91	0.13	4	70.842				1832
14900	-61	4937	8.7	K2	20 58.025	0.14	5	70.938	-61 32 57.90	0.29	5	70.938				12907
14901	-37	10213	8.2	K0	21 00.008	0.09	4	70.185	-37 23 23.74	0.42	4	70.185				12908
14902	-26	10849	7.47	G5	21 02.094	0.23	4	71.018	-27 07 41.81	0.21	4	71.018	20693			12909
14903	-11	3940	5.78	K0	15 21 07.294	0.05	6	68.824	-12 11 33.22	0.06	6	68.824	3214	20695	3465	33214
14904	-0	2961	6.10	F0	21 08.941	0.04	37	71.463	-0 50 43.89	0.06	36	71.432	1406	20697	3467	31406
14905	-22	3948	8.5	K5	21 16.019	0.06	5	71.293	-22 32 50.50	0.16	5	71.293				12910
14906	-34	10349	9.3	K0	21 17.194	0.16	4	70.893	-34 49 23.38	0.24	4	70.893				12911
14907	-13	4152	8.2	K0	21 18.102	0.08	3	71.630	-14 08 00.87	0.20	3	71.630				12912
14908	-83	584	8.5	K0	15 21 19.927	0.06	4	69.824	-83 32 22.45	0.24	4	69.824				19766
14908	SP				21 19.983	0.17	4	69.551	-83 32 21.95	0.22	4	69.551				19766
14909	-25	10907	8.1	K5	21 29.731	0.22	4	70.817	-25 35 11.69	0.17	4	70.817				12913
14910	-43	9886	8.6	K	21 35.312	0.14	4	70.841	-44 03 23.88	0.11	4	70.841				1833
14911	-58	5919	8.9	K0	21 35.905	0.15	4	70.160	-59 02 44.88	0.09	4	70.160				12914
14912	-31	11932	8.7	F8	15 21 37.400	0.08	4	70.791	-31 34 41.30	0.12	4	70.791				12915
14913	-19	4099	8.1	K2	21 37.492	0.06	2	72.466	-19 47 15.35	0.32	2	72.466				12916
14914	-4	3880	8.5	K0	21 42.700	0.17	2	72.753	-4 55 21.72	0.44	2	72.753				12917
14915	-61	4939	8.8	K0	21 47.689	0.18	4	70.146	-62 13 12.55	0.16	4	70.146				12918
14916	+3	3020	8.4	F2	21 48.252	0.09	2	71.497	+2 58 24.35	0.31	2	71.497				12919
14917	-22	3949	8.3	F0	15 21 54.473	0.13	4	70.647	-23 19 59.22	0.13	4	70.647				12920
14918	-21	4103	7.5	K2	22 02.927	0.09	4	70.702	-21 52 04.27	0.12	4	70.702				12921
14919	-33	10507	9.2	G0	22 05.166	0.08	4	69.862	-33 21 31.63	0.22	4	69.862				12922
14920	-41	9862	8.5	G5	22 05.516	0.16	4	70.228	-41 45 57.43	0.21	4	70.228				1834
14921	-53	6482	7.5	K0	22 07.407	0.17	4	70.376	-54 08 43.05	0.12	4	70.376				12923
14922	+2	2957	8.5	K2	15 22 28.978	0.13	2	70.369	+1 41 06.93	0.09	2	70.369				12924
14923	-70	2046	8.9	G	22 33.903	0.09	4	69.400	-71 14 38.91	0.26	4	69.400				19767
14924	-16	4079	9.1	K2	22 36.123	0.22	3	71.128	-16 55 08.16	0.22	3	71.128				12925
14925	-60	5782	8.9	K0	22 38.475	0.14	4	69.421	-60 26 24.06	0.14	4	69.421				12926
14926	-27	10363	7.7	G5	22 39.269	0.18	4	70.391	-27 55 13.10	0.16	4	70.391				12927
14927	-44	10111	8.70	K0	15 22 41.125	0.17	4	70.258	-44 41 35.54	0.07	4	70.258	20726			1835
14928	-36	10143	7.59	K0	22 51.647	0.09	4	70.576	-36 17 53.78	0.14	4	70.576	20728			12928
14929	-12	4253	8.5	A2	22 54.970	0.13	2	70.444	-12 41 44.65	0.30	2	70.444				12929
14930	-18	4061	7.59	A2	23 01.013	0.18	2	71.451	-18 20 28.53	0.28	2	71.451			3471	12930
14931	-28	11357	8.7	K2	23 01.272	0.11	4	69.834	-29 15 20.90	0.12	4	69.834				12931
14932*	-79	838	9.9	G5	15 23 02.314	0.24	6	71.295	-79 59 02.40	0.28	5	71.305				19768
14932	SP				23 01.995	0.29	4	70.392	-79 59 02.19	0.39	4	70.392				19768
14933	-55	6557	8.3	K0	23 05.262	0.11	4	69.858	-55 21 15.17	0.03	4	69.858				12932
14934	-0	2965	7.5	F2	23 09.714	0.12	2	70.405	-1 04 45.94	0.09	2	70.405				12933
14935	-64	3178	5.72	K5	23 10.236	0.06	6	68.763	-64 21 26.60	0.06	6	68.763	3217	20733	3472	33217
14936	-46	10064	8.0	G5	15 23 13.393	0.23	4	70.832	-47 14 49.49	0.03	4	70.832				1836
14937	-24	12066	8.6	A2	23 19.682	0.13	4	69.837	-24 48 50.42	0.08	4	69.837				12934
14938	-58	5931	8.6	K2	23 23.182	0.10	4	70.194	-58 46 50.87	0.04	4	70.194				12935
14939	-51	9106	8.0	K0	23 27.544	0.13	4	70.613	-51 31 31.60	0.06	4	70.613				1837
14940	-53	6498	7.6	K0	23 28.045	0.11	4	70.098	-53 55 48.49	0.05	4	70.098				12936
14941	+15	2858	5.46	M0	15 23 28.087	0.02	126	71.563	+15 36 09.60	0.03	122	71.532	570	20740	3474	80570
14942	-38	10317	8.8	K0	23 30.049	0.05	4	71.026	-39 11 38.15	0.20	4	71.026				12937
14943	-48	9954	8.0	M1	23 31.683	0.17	4	70.856	-48 16 53.76	0.16	4	70.856				1838
14944	-56	6760	8.8	K0	24 02.590	0.05	4	69.401	-56 20 40.58	0.16	4	69.401				12938
14945	-36	10161	5.52	B5	24 05.481	0.08	6	71.106	-36 35 37.46	0.17	6	71.106	20756			21083
14946	-42	10417	8.5	K0	15 24 06.885	0.08	4	69.911	-42 54 49.79	0.11	4	69.911				1839
14947	-20	4237	8.8	G0	24 12.759	0.07	4	69.397	-20 34 00.17	0.16	4	69.397				12939
14948	-15	4107	8.7	A3	24 17.559	0.23	2	70.420	-15 36 25.92	0.08	2	70.420				12940
14949	-3	3784	8.5	G0	24 26.027	0.16	2	70.967	-3 23 17.65	0.01	2	70.967				12941
14950	-5	4079	8.1	K5	24 29.408	0.24	2	71.523	-5 38 38.46	0.03	2	71.523	20762			12942
14951	-1	3057	8.6	K0	15 24 42.972	0.15	2	70.502	-1 39 23.96	0.04	2	70.502				12943
14952	-38	10341	8.3	K0	24 44.273	0.24	4	69.858	-38 28 25.41	0.12	4	69.858				12944
14953	-64	3188	8.2	K0	24 47.006	0.11	4	69.792	-64 52 40.19	0.07	4	69.792				19769
14954	+1	3080	8.5	G5	24 51.188	0.08	2	71.521	+1 00 40.90	0.01	2	71.521				12945
14955	-14	4208	7.9	K2	24 54.145	0.12	2	72.321	-14 46 52.29	0.15	2	72.321				12946
14956	-8	3979	7.8	K0	15 24 56.580	0.15	2	71.915	-8 46 30.79	0.41	2	71.915				12947
14957	-45	9939	9.1	K7	24 58.721	0.12	4	70.698	-45 59 35.88	0.20	4	70.698				1840
14958	-53	6517	7.7	F8	25 03.645	0.09	4	70.365	-53 45 13.20	0.23	4	70.365				12948
14959	-46	10091	9.0	K0	25 10.540	0.10	4	69.833	-46 57 55.29	0.14	4	69.833				1841
14960	-40	9650	8.8	G5	25 10.645	0.16	5	71.000	-40 33 39.26	0.12	4	70.710				1842

14932 9.2m-10.7m, 1st, 17th.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
14961	-0	2971	8.5	A2	15 25 11.430	0.16	2	70.415	-0 26 29.54	0.18	2	70.415				12949
14962	-69	2368	8.5	K0	25 11.902	0.13	4	70.871	-70 13 20.74	0.10	4	70.871				19770
14963	-73	1584	9.4	K0	25 18.135	0.38	4	70.893	-73 36 55.16	0.17	3	70.083				19771
14964	-20	4239	7.7	G5	25 24.550	0.12	4	70.741	-21 02 13.67	0.11	4	70.741		20781		12950
14965	-16	4089	5.92	K0	25 25.927	0.02	100	71.691	-16 32 37.32	0.02	96	71.652	1407	20782	3479	31407
14966	+25	2916	6.26	K5	15 25 29.755	0.21	6	69.022	+25 16 27.98	0.18	6	69.022	3219	20786	3481	33219
14967	-62	4517	8.6	K5	25 30.786	0.14	4	71.319	-63 05 43.87	0.06	4	71.319				12951
14968	-50	9461	9.3	K5	25 32.684	0.16	5	70.997	-50 16 44.01	0.32	5	70.997				1843
14969	-29	11710	7.6	A3	25 37.895	0.08	4	69.921	-29 23 45.47	0.15	4	69.921				12952
14970	-56	6768	8.1	A3	25 37.929	0.15	5	71.131	-57 04 31.97	0.11	5	71.131				12953
14971*	-30	12259	8.63	K0	15 25 38.386	0.13	4	70.928	-31 07 20.09	0.23	4	70.928		20790		12954
14972	+29	2670	3.72	F0p	25 45.633	0.08	13	71.563	+29 16 39.17	0.13	13	71.563	572	20795	3483	30572
14973	-8	3985	8.2	K2	25 45.909	0.20	2	70.369	-8 59 15.66	0.02	2	70.369				12955
14974	-36	10185	9.0	K5	25 47.342	0.07	4	69.825	-36 21 02.92	0.11	4	69.825				12956
14975	-46	10100	5.05	K0	25 54.788	0.08	7	70.216	-46 33 39.39	0.10	6	70.042	3220	20799		33220
14976	-72	1802	5.65	B5p	15 26 00.979	0.03	96	71.078	-73 13 07.37	0.04	93	71.048	567	20801	3484	30567
14976	SP				26 00.974	0.07	55	70.989	-73 13 07.76	0.13	54	70.994	567	20801	3484	30567
14977	+2	2965	5.12	A5	26 06.394	0.11	6	70.496	+2 00 51.72	0.11	6	70.496	3221	20805		33221
14978	-24	12106	7.8	K0	26 12.334	0.16	4	70.082	-24 16 46.93	0.16	4	70.082				12957
14979	+3	3039	8.4	K0	26 15.740	0.21	2	71.394	+3 37 11.91	0.38	2	71.394				12958
14980	-52	8408	8.0	K0	15 26 17.152	0.10	4	70.880	-52 40 34.10	0.18	4	70.880				12959
14981	-27	10392	8.6	G5	26 19.000	0.08	4	70.670	-27 31 50.61	0.24	4	70.670				12960
14982	-65	3074	7.7	G5	26 20.193	0.11	4	70.719	-65 25 42.11	0.16	4	70.719				19772
14983	-48	10001	8.5	M0	26 20.847	0.13	4	70.479	-49 10 07.10	0.10	4	70.479				1844
14984	-28	11369	8.4	G5	26 24.315	0.19	4	70.646	-28 40 33.03	0.08	4	70.646				12961
14985	-26	10901	8.2	K5	15 26 26.356	0.10	4	71.314	-26 26 03.18	0.11	4	71.314				12962
14986	-6	4216	8.5	K2	26 29.708	0.12	2	71.831	-6 48 27.78	0.12	2	71.831				12963
14987	-4	3895	8.5	A2	26 31.346	0.08	2	72.409	-4 25 51.36	0.02	2	72.409				12964
14988	-18	4076	9.0	B9	26 32.181	0.01	2	71.529	-19 13 58.94	0.09	2	71.529				12965
14989	-11	3952	8.8	K7	26 40.760	0.13	2	70.754	-11 33 32.30	0.01	2	70.754				12966
14990	-16	4093	7.23	F0p	15 26 44.652	0.06	2	70.873	-17 16 10.96	0.09	2	70.873		20814		12967
14991	+2	2968	8.6	F8	27 04.992	0.10	3	71.998	+1 55 45.48	0.64	2	72.374		20824		12968
14992	-39	9924	8.7	K0	27 09.202	0.10	4	70.283	-39 38 18.24	0.03	4	70.283				12969
14993	-12	4265	8.2	G5	27 14.276	0.20	2	71.927	-12 36 21.06	--	1	71.559				12970
14994	-9	4153	8.8	G0	27 15.250	0.44	2	72.357	-9 53 04.50	0.20	2	72.357				12971
14995	-15	4130	8.7	K5	15 27 25.286	0.11	2	70.392	-15 31 08.26	0.36	2	70.392				12972
14996	-24	12121	8.6	K2	27 28.895	0.10	4	70.341	-25 07 45.52	0.14	4	70.341				12973
14997	-33	10558	7.99	K0	27 29.513	0.24	4	70.258	-33 24 37.02	0.09	4	70.258		20832		12974
14998p	-81	709	8.1	F8	27 31.394	0.20	5	70.827	-81 33 32.16	0.14	5	70.827				19773
14998	SP				27 31.314	0.23	4	69.850	-81 33 31.90	0.25	4	69.850				19773
14999	-7	4037	8.6	A2	15 27 33.860	0.46	2	70.372	-7 53 00.29	0.01	2	70.372				12975
15000	-43	9974	9.1	K0	27 34.323	0.16	4	70.311	-43 15 52.41	0.15	4	70.311				1845
15001	-67	2901	8.4	G5	27 41.688	0.12	5	70.093	-67 57 38.16	0.16	5	70.093				19774
15002	-20	4246	6.10	A2	27 42.530	0.03	4	70.394	-20 33 28.81	0.10	4	70.394		20834	3487	12976
15003	-21	4128	7.5	G0	27 47.998	0.07	4	70.341	-21 42 30.89	0.09	4	70.341				12977
15004	-21	4129	8.8	A2	15 27 50.072	0.14	4	69.707	-22 01 12.09	0.10	4	69.707				12978
15005	-41	9988	8.5	K0	28 02.526	0.18	5	70.027	-42 13 22.81	0.10	5	70.027				1846
15006	-5	4090	8.9	K0	28 24.588	0.08	2	72.090	-6 12 55.07	0.28	2	72.090				12979
15007	-3	3793	8.3	K0	28 29.461	0.10	2	70.435	-4 11 35.13	0.24	2	70.435				12980
15008	+9	3055	6.46	F2	28 29.665	0.02	120	71.500	+8 44 55.91	0.03	118	71.478	1408	20850	3490	81408
15009	-55	6603	8.3	K0	15 28 32.018	0.06	4	69.429	-55 38 48.14	0.21	4	69.429				12981
15010	-37	10310	8.7	K2	28 33.908	0.14	4	70.321	-37 28 36.85	0.15	4	70.321				12982
15011	-32	10867	8.0	K0	28 37.245	0.19	4	70.370	-32 27 15.99	0.16	4	70.370				12983
15012	-84	505	8.9	K0	28 39.993	0.12	4	69.275	-84 35 33.23	0.21	4	69.275				19775
15012	SP				28 39.920	0.14	4	69.537	-84 35 33.18	0.24	4	69.537				19775
15013	-32	10868	6.56	B8	15 28 42.297	0.08	6	69.283	-32 42 42.20	0.13	6	69.283	3223	20852	3491	33223
15014	-61	5029	8.3	K5	28 45.478	0.09	4	69.337	-61 27 11.09	0.20	4	69.337				12984
15015	-13	4183	8.5	K2	28 46.230	0.20	2	72.057	-14 08 50.43	0.03	2	72.057				12985
15016	-16	4104	8.8	M1	28 49.168	0.32	3	71.835	-16 51 14.24	0.11	3	71.835				12986
15017	-43	9983	7.8	K2	28 49.610	0.16	4	70.326	-44 14 17.60	0.25	4	70.326				1847
15018f	-19	4128	6.10	A5	15 28 50.382	0.10	4	70.391	-19 59 43.54	0.04	4	70.391		20861		12987
15019	-10	4119	8.3	F8	28 53.983	0.04	2	70.522	-11 04 27.40	0.01	2	70.522				12988
15020	-17	4356	8.7	K0	29 06.943	0.11	2	71.457	-18 19 02.69	0.49	2	71.457				12989
15021	-6	4224	8.1	A0	29 10.848	0.31	2	70.989	-6 59 02.75	--	1	70.605				12990
15022	-30	12311	8.6	A5	29 14.386	0.11	4	70.209	-30 58 25.73	0.06	4	70.209				12991
15023	-54	6567	8.2	K0	15 29 24.289	0.14	4	69.356	-54 36 32.29	0.10	4	69.356				12992
15024	+4	3023	8.7	G0	29 30.238	0.18	2	71.444	+4 14 05.78	0.38	2	71.444				12993
15025	+14	2890	9.0	--	29 30.569	0.09	2	71.016	+14 13 46.35	0.19	2	71.016				27089
15026	-9	4163	6.67	G0	29 34.363	0.14	3	71.672	-10 16 10.80	--	1	71.477		20875		12994
15027	-47	10085	8.5	K0	29 34.785	0.21	5	71.207	-47 38 38.63	0.23	4	70.965				1848
15028	-18	4088	9.3	B9	15 29 41.712	0.32	2	70.388	-19 14 03.48	0.19	2	70.388		20877		12995
15029	-50	9549	9.0	K2	29 42.807	0.08	4	68.904	-50 24 53.95	0.11	4	68.904				1849
15030	-19	4135	5.46	A2	29 44.020	0.07	6	69.612	-19 30 06.10	0.15	6	69.612	3224	20878		33224
15031	-1	3066	8.5	K5	29 48.931	0.20	2	70.372	-1 36 54.37	0.10	2	70.372				12996
15032	-38	10440	8.8	K0	29 51.718	0.17	5	70.682	-38 55 53.95	0.07	4	70.312				12997

14971 SDS, 9.4m-9.9m, 2nd, 179°.
14998 11.2m, 2nd, 41°.

15018 A 9681, 8.7m, 11th, 273°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15033	-48	10057	8.0	K0	15 29 54.154	0.07	4	70.314	-48 49 57.80	0.08	4	70.314				1850
15034	-68	2493	7.60	M0	29 58.629	0.13	4	69.367	-68 43 18.44	0.14	4	69.367		20882		19776
15035	-29	11763	8.5	K5	30 03.503	0.08	4	69.438	-29 29 30.68	0.04	4	69.438				12998
15036	-16	4110	5.59	B3	30 05.408	0.09	6	70.710	-16 41 04.98	0.16	6	70.710		20887		21084
15037	-25	10968	7.52	K2	30 06.207	0.15	4	69.427	-25 37 57.20	0.17	4	69.427		20890		12999
15038	-22	3975	8.4	K5	15 30 18.906	0.08	4	69.885	-23 17 50.15	0.10	4	69.885				13000
15039	-33	10590	7.9	A2	30 22.342	0.12	4	70.314	-34 11 30.52	0.13	4	70.314				13001
15040	-0	2982	5.76	K0	30 23.157	0.08	7	69.834	-1 01 05.74	0.12	6	69.597	3226	20896		33226
15041*	-56	6795	7.21	K0	30 26.720	0.17	5	70.336	-56 54 20.86	0.13	5	70.336		20898		13002
15042	-12	4278	8.0	G5	30 29.209	0.01	2	70.966	-12 50 42.60	0.05	2	70.966				13003
15043	-34	10438	9.1	K0	15 30 32.135	0.11	4	70.717	-35 11 53.04	0.15	4	70.717				13004
15044	-4	3914	8.5	F5	30 40.877	0.11	2	71.450	-4 41 37.15	0.41	2	71.450				13005
15045	-32	10892	8.6	K0	30 42.068	0.11	4	69.929	-33 12 33.04	0.18	4	69.929				13006
15046	-46	10166	9.0	G5	30 43.568	0.15	4	70.342	-46 47 10.39	0.14	4	70.342				1851
15047	+3	3048	7.48	K0	30 47.445	0.01	2	70.409	+3 29 25.57	0.05	2	70.409		20904	3496	13007
15048	-39	9975	9.0	K0	15 30 59.072	0.17	4	70.576	-39 35 18.26	0.18	4	70.576				13008
15049	-2	4014	7.9	K2	31 02.113	0.02	2	70.396	-3 08 13.82	0.14	2	70.396				13009
15050	-36	10279	9.1	K0	31 12.931	0.19	4	70.617	-37 14 26.93	0.16	4	70.617				13010
15051	+4	3029	8.7	K2	31 12.977	0.15	2	71.919	+4 10 31.35	0.26	2	71.919				13011
15052	-30	12340	9.5	K0	31 14.844	0.15	5	70.968	-30 36 51.07	0.16	5	70.968				13012
15053	-14	4232	8.6	K2	15 31 17.656	0.25	2	71.925	-14 42 05.91	0.28	2	71.925				13013
15054	-62	4622	8.7	K0	31 19.614	0.11	4	69.361	-62 53 46.91	0.18	4	69.361				13014
15055	-71	1885	9.1	K0	31 21.774	0.13	4	70.729	-71 48 56.82	0.10	4	70.729				19777
15056	-9	4171	4.83	K0	31 26.915	0.03	53	71.601	-9 53 45.23	0.03	53	71.601	1409	20914	3499	31409
15057	-84	510	5.66	A2	31 28.048	0.02	181	71.013	-84 18 13.23	0.03	175	70.981	1666	20915	3498	61666
15057 SP					15 31 28.024	0.03	154	70.797	-84 18 13.24	0.04	148	70.803	1666	20915	3498	71666
15058	-60	5908	8.8	G5	31 28.206	0.09	5	70.565	-60 34 38.22	0.14	5	70.565				13015
15059	-74	1433	9.4	K0	31 28.895	0.12	3	70.676	-74 15 47.56	0.14	3	70.676				19778
15060	-5	4100	6.46	G0	31 41.970	0.06	6	69.188	-5 31 42.87	0.08	6	69.188	3227	20920		33227
15061	-8	4010	5.15	B5	31 44.224	0.02	2	71.926	-9 01 00.11	0.47	2	71.926		20923		13016
15062*	-27	10445	8.6	G5	15 31 45.688	0.08	4	70.345	-27 57 51.15	0.04	4	70.345				13017
15063*	-40	9760	2.95	B3	31 47.936	0.13	7	71.818	-41 00 01.66	0.10	5	71.651		20926	3500	21085
15064	+3	3050	8.8	K0	31 48.299	0.03	3	72.255	+2 54 04.46	0.08	3	72.255				13018
15065	-11	3969	8.7	K2	31 52.048	0.25	2	72.740	-11 41 04.15	0.04	2	72.740				13019
15066	-26	10944	8.2	A0	31 52.245	0.03	5	70.899	-26 59 12.17	0.16	4	70.814				13020
15067	-51	9263	8.8	K0	15 31 52.542	0.09	4	70.788	-51 25 48.94	0.13	4	70.788				1852
15068	-0	2984	8.8	K2	31 54.430	0.11	4	72.269	-1 17 01.89	0.06	4	72.269				13021
15069	-33	10600	9.1	K	31 56.964	0.03	4	70.161	-34 04 11.53	0.13	4	70.161				13022
15070	+5	3037	7.02	A2	32 02.435	0.04	2	72.400	+4 53 49.05	0.16	2	72.400		20930		13023
15071	-65	3102	4.11	K0	32 07.159	0.03	52	71.089	-66 09 04.85	0.04	50	71.056	574	20932	3501	30574
15072	-24	12179	8.09	F2	15 32 07.500	0.12	4	70.435	-24 56 21.78	0.07	4	70.435		20933		13024
15073	-16	4114	7.6	K0	32 09.369	0.21	2	72.410	-16 58 21.49	0.09	2	72.410				13025
15074	-28	11427	7.8	F8	32 10.804	0.06	4	70.454	-28 18 28.03	0.11	4	70.454				13026
15075	+0	3375	7.7	K0	32 15.739	0.24	2	72.753	+0 01 10.35	0.05	2	72.753				13027
15076	-49	9785	8.7	K5	32 15.886	0.14	4	71.006	-49 48 29.84	0.13	4	71.006				1853
15077	-9	4173	8.7	A0	15 32 16.833	0.15	2	70.774	-9 38 08.67	0.08	2	70.774				13028
15078	-20	4266	8.6	A0	32 17.053	0.04	4	71.088	-20 50 30.96	0.12	4	71.088				13029
15079	-31	12073	8.7	K2	32 21.030	0.15	4	70.834	-31 43 22.13	0.11	4	70.834				13030
15080p	-44	10239	4.84	B3	32 26.005	0.09	6	71.634	-44 47 33.68	0.07	6	71.634		20943		21086
15081	-41	10078	8.5	K0	32 26.253	0.04	4	70.582	-41 55 58.39	0.13	4	70.582				1854
15082	+2	2977	6.58	A3	15 32 32.590	0.04	2	72.810	+1 50 06.79	0.39	2	72.810		20946		13031
15083	-12	4286	7.8	F8	32 33.272	0.26	2	72.787	-12 20 29.01	0.12	2	72.787				13032
15084	+27	2512	2.31	A0	32 34.326	0.05	36	70.845	+26 52 52.51	0.07	35	70.834	578	20947	3502	80578
15085	-77	1134	6.04	K2	32 34.527	0.05	6	71.329	-77 45 11.68	0.08	6	71.329	3228	20948		33228
15085 SP					32 34.553	0.22	6	70.608	-77 45 11.50	0.33	6	70.608	3228	20948		53228
15086	+1	3098	8.6	M0	15 32 35.363	0.32	2	72.898	+0 54 42.84	0.01	2	72.898				13033
15087	-25	10985	8.7	B9	32 40.109	0.12	4	70.568	-26 08 08.21	0.11	4	70.568				13034
15088	-14	4237	4.02	K0	32 43.572	0.06	13	70.845	-14 37 26.83	0.10	13	70.845	577	20949	3503	30577
15089	-43	10036	5.47	K5	32 45.906	0.04	34	71.305	-44 13 52.37	0.05	33	71.279	1410	20950	3504	31410
15090	-64	3220	8.1	K0	32 51.261	0.20	4	70.699	-64 21 59.45	0.21	4	70.699				19779
15091	-3	3800	8.5	K2	15 33 04.950	0.00	2	70.897	-3 19 20.04	0.06	2	70.897				13035
15092	-53	6586	7.94	A5	33 05.927	0.16	4	69.721	-53 33 14.39	0.14	4	69.721		20957		13036
15093	-21	4148	7.74	G5	33 13.005	0.19	4	70.644	-21 34 50.90	0.23	4	70.644		20959		13037
15094	-69	2412	9.0	K0	33 15.631	0.08	4	71.382	-69 22 03.58	0.21	4	71.382				19780
15095	+18	3044	6.06	K0	33 16.804	0.11	6	70.872	+17 49 14.85	0.16	6	70.872	3230	20962	3507	33230
15096	-82	658	8.5	K5	15 33 25.890	0.16	4	72.329	-82 30 03.53	0.15	4	72.329				19781
15096 SP					33 25.775	0.25	3	69.666	-82 30 03.98	0.18	3	69.666				19781
15097	-40	9789	8.0	M0	33 28.268	0.20	4	70.607	-40 31 38.73	0.16	4	70.607				1855
15098	+11	2826	6.11	G5	33 30.453	0.09	6	71.158	+11 25 50.34	0.15	6	71.158	3231	20968	3509	33231
15099	-2	4021	8.3	K2	33 36.739	0.28	2	72.415	-2 21 06.85	0.34	2	72.415				13038
15100*	-53	6592	7.8	G5	15 33 37.241	0.10	5	70.970	-54 12 00.27	0.13	5	70.970				13039
15101	-32	10940	8.7	--	33 37.462	0.05	4	70.921	-32 25 01.08	0.10	4	70.921				13040
15102	-7	4059	8.2	K5	33 42.027	0.14	2	72.087	-7 43 50.99	0.15	2	72.087				13041
15103	-36	10301	8.9	F8	33 46.768	0.05	4	71.798	-37 04 43.47	0.16	4	71.798				13042
15104	-72	1838	8.6	K2	33 48.088	0.10	4	71.301	-72 42 08.56	0.14	4	71.301				19782

15041 7.3m-10.8m, 0°9, 333°.

15062 8.9m-10.9m, 1°2, 302°.

15063 SDS, 3.7m-3.7m, 0°1.

15080 SDS, 7.0m, 2°2, 4°.

15100 7.9m-10.9m, 0°7, 45°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
15105	-51	9301	8.5	K5	15 33 49.269	0.14	5	71.512	-51 27 16.33	0.17	4	71.345				1856
15106	-40	9794	7.33	K0	33 50.317	0.10	4	71.571	-40 51 16.50	0.16	4	71.571		20975		1857
15107	-27	10464	3.78	K2	33 58.933	0.07	13	71.404	-27 58 15.27	0.10	13	71.404	579	20979	3510	30579
15108	-15	4144	8.8	K2	34 05.599	0.11	2	72.871	-15 20 58.94	0.33	2	72.871				13043
15109	-26	10958	7.24	B9	34 06.317	0.07	6	71.827	-26 19 41.82	0.10	5	71.508		20982		21087
15110	-45	10066	8.5	K0	15 34 12.108	0.07	4	70.075	-45 32 14.02	0.09	4	70.075				1858
15111	-56	6827	8.2	K5	34 15.927	0.17	4	70.966	-57 06 42.77	0.19	4	70.966				13044
15112	-4	3933	8.7	K2	34 19.191	0.15	2	72.912	-4 47 12.62	0.01	2	72.912				13045
15113	-17	4379	8.1	G0	34 21.773	0.04	2	72.392	-18 10 16.33	0.05	2	72.392				13046
15114	-25	11000	6.03	B9	34 28.148	0.06	6	71.909	-26 06 57.90	0.14	6	71.909		20993		21088
15115	-12	4295	8.1	G0	15 34 29.220	0.14	2	73.245	-13 12 35.48	0.03	2	73.245				13047
15116	-61	5118	8.5	K5	34 29.690	0.10	4	71.435	-61 39 51.31	0.13	4	71.435				13048
15117	-55	6649	8.5	K0	34 34.614	0.10	4	70.848	-55 39 47.08	0.11	4	70.848				13049
15118	-42	10601	4.27	K5	34 40.230	0.10	6	70.377	-42 24 16.46	0.11	6	70.377	3232	21001		33232
15119	-38	10526	8.1	K0	34 42.735	0.15	4	70.805	-38 47 20.49	0.10	4	70.805				13050
15120	-24	12204	8.6	K2	15 34 46.450	0.08	5	70.390	-24 22 04.43	0.15	5	70.390				13051
15121	-41	10125	8.0	K2	34 48.399	0.13	4	70.880	-41 23 49.04	0.21	4	70.880				1859
15122	-16	4123	8.7	A3	34 49.962	0.13	3	73.120	-16 34 04.16	0.22	3	73.120				13052
15123	-57	7120	8.7	K0	34 51.712	0.05	4	71.399	-58 02 54.05	0.07	4	71.399				13053
15124	-0	2990	7.8	K2	34 54.356	0.36	2	73.339	-0 43 16.92	0.11	2	73.339				13054
15125	-51	9324	5.48	A0	15 35 05.663	0.06	20	70.649	-52 12 35.03	0.07	20	70.649	1411	21007	3513	31411
15126	-69	2422	6.46	A2	35 07.527	0.08	6	71.807	-70 03 55.25	0.13	5	71.650	3233	21008		33233
15127	-3	3806	7.1	F8	35 08.494	--	1	73.411	-3 26 29.48	--	1	73.411				13056
15128	-58	6127	8.8	F0	35 12.895	0.07	4	69.925	-59 02 39.47	0.27	4	69.925				13058
15129	-38	10532	6.62	B9	35 14.902	0.08	6	71.462	-38 59 51.70	0.13	6	71.462	3234	21012		33234
15130	-29	11834	8.0	F0	15 35 17.094	0.04	4	70.360	-29 25 59.28	0.13	4	70.360				13059
15131	-24	12207	8.4	A0	35 23.586	0.15	4	71.425	-24 29 31.77	0.10	4	71.425				13061
15132	-19	4164	8.7	K0	35 24.773	0.22	3	71.173	-20 11 09.43	0.20	3	71.173				13063
15133	-48	10157	8.0	M0	35 31.195	0.13	4	70.891	-48 27 05.09	0.18	4	70.891				1860
15134	-29	11837	3.80	B3	35 34.691	0.11	3	70.600	-29 36 53.71	0.20	3	70.600		21019	3514	21089
15135	-26	10966	8.4	F8	15 35 42.151	0.14	4	71.015	-26 40 41.66	0.13	4	71.015				13065
15136	-75	1222	6.02	A0	35 42.190	0.09	6	70.164	-75 55 14.62	0.09	6	70.164	3235	21025		33235
15136	SP				35 42.215	0.10	5	70.142	-75 55 14.94	0.24	5	70.142	3235	21025		53235
15137	-59	6206	6.06	F5	35 49.685	0.05	6	71.478	-59 44 41.25	0.06	6	71.478	3236	21027		33236
15138	-17	4388	7.8	K0	35 50.487	--	1	73.288	-17 30 07.87	--	1	73.288				13066
15139	-62	4715	9.2	K0	15 35 54.456	0.13	4	70.909	-63 12 59.35	0.11	4	70.909				13067
15140	-35	10415	9.1	G5	35 58.424	0.27	4	71.655	-35 50 54.70	0.09	4	71.655				13068
15141	-21	4159	7.7	K5	36 05.261	0.13	5	71.973	-22 18 41.40	0.23	4	71.612				13069
15142	-19	4169	8.0	B9	36 06.919	--	1	70.578	-19 34 13.48	--	1	70.578				21090
15143	-22	3996	6.21	A0	36 24.502	0.08	4	71.089	-22 59 17.75	0.16	4	71.089		21039		13071
15144	-78	1031	9.1	F5	15 36 27.261	0.14	6	71.806	-78 33 11.93	0.33	5	71.918				19783
15144	SP				36 26.856	0.51	4	70.508	-78 33 12.96	0.87	3	70.400				19783
15145	+ 3	3061	7.5	K2	36 30.699	--	1	72.282	+ 3 37 47.91	--	1	72.282				13073
15146	-33	10631	4.63	K0	36 35.011	0.12	6	71.760	-34 15 01.38	0.15	6	71.760	3237	21042	3520	33237
15147	-36	10318	8.4	G0	36 38.331	0.05	4	71.236	-36 16 25.90	0.12	4	71.236				13074
15148	-30	12421	8.8	G5	15 36 39.634	0.16	4	71.451	-30 46 28.78	0.20	4	71.451				13075
15149	-44	10297	7.48	K2	36 41.095	0.05	4	70.592	-44 51 34.32	0.04	4	70.592		21047		1861
15150	-70	2106	8.9	K2	36 43.450	0.13	4	70.309	-70 28 12.39	0.20	4	70.309				19784
15151	-60	5991	7.7	K5	36 44.811	0.06	4	70.337	-60 58 48.33	0.09	4	70.337				13076
15152	-27	10495	8.6	K5	36 49.071	0.08	4	70.862	-27 52 52.77	0.07	4	70.862				13077
15153	-38	10560	8.1	G5	15 36 52.905	0.01	4	70.942	-38 32 52.95	0.22	3	70.491				13078
15154	-38	10561	8.2	K2	36 54.380	0.12	4	71.028	-39 13 45.99	0.08	4	71.028				13079
15155	-43	10099	8.2	F0	36 54.477	0.15	4	71.404	-43 20 43.13	0.06	4	71.404				1862
15156	-73	1635	8.9	K0	36 59.009	0.03	4	71.069	-73 29 43.40	0.05	4	71.069				19785
15157	-9	4194	8.3	K0	37 00.905	0.21	2	73.286	-9 27 28.32	0.00	2	73.286				13080
15158	-13	4218	8.3	K0	15 37 01.900	0.21	3	71.739	-13 53 39.33	0.07	3	71.739		21053		13081
15159	-52	8715	8.4	K0	37 02.199	0.10	4	70.788	-52 18 45.41	0.12	4	70.788				13082
15160	-30	12427	9.2	F2	37 05.451	0.03	4	70.819	-30 34 26.49	0.20	4	70.819				13083
15161	-49	9874	8.5	K2	37 06.824	0.15	3	70.431	-49 41 53.02	0.13	3	70.431				1863
15162	-23	12458	5.06	K0	37 19.163	0.09	6	69.523	-23 39 25.36	0.07	6	69.523	3239	21057		33239
15163	-58	6155	8.6	K0	15 37 23.993	0.11	4	70.296	-58 36 12.12	0.17	4	70.296				13084
15164	-47	10211	8.8	K2	37 32.197	0.09	4	70.140	-47 42 06.71	0.04	4	70.140				1864
15165	-42	10653	8.5	K0	37 33.047	0.02	4	71.001	-42 39 54.22	0.08	4	71.001				1865
15166	-35	10436	7.58	A5	37 34.868	0.18	4	70.251	-35 15 59.39	0.16	4	70.251		21067		13085
15167	-66	2813	8.6	K0	37 40.283	0.21	4	70.188	-66 41 13.42	0.12	4	70.188				19786
15168	-32	10984	8.2	K2	15 37 45.851	0.07	4	70.581	-32 59 07.47	0.11	4	70.581				13086
15169	-10	4143	8.6	A2	37 47.821	0.24	2	71.336	-10 43 24.69	0.12	2	71.336				13087
15170	-21	4165	8.1	K0	37 48.597	0.13	5	70.664	-21 26 38.76	0.15	4	70.521				13088
15171	+ 1	3110	8.4	G0	37 49.167	0.11	2	71.312	+ 1 37 48.87	0.04	2	71.312				13089
15172	-65	3121	7.8	K0	37 58.660	0.13	4	69.431	-65 51 37.00	0.32	4	69.431				19787
15173	-32	10988	8.6	A5	15 38 00.018	0.13	4	70.844	-32 29 34.37	0.19	4	70.844				13090
15174	-3	3815	9.0	G5	38 01.501	0.30	3	72.057	-3 19 07.13	0.15	3	72.057				13091
15175	-75	1230	9.2	K2	38 02.045	0.15	4	69.800	-75 38 43.96	0.40	4	69.800				19788
15175	SP				38 01.945	0.32	4	69.836	-75 38 44.00	0.05	4	69.836				19788
15176	+ 4	3046	8.5	F0	38 05.386	0.01	2	72.811	+ 4 19 50.42	0.22	2	72.811				13092

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
15177	-46	10270	8.2	K2	15 38 08.755	0.20	4	70.598	-46 43 10.40	0.07	4	70.598				1866
15178	-5	4136	8.4	K0	38 11.417	0.17	2	72.416	-5 28 21.49	0.06	2	72.416				13093
15179	-31	12173	8.4	K5	38 13.380	0.19	5	71.527	-31 29 47.16	0.07	5	71.527				13094
15180	-8	4050	8.2	G5	38 18.228	0.00	2	72.364	-8 34 54.86	0.04	2	72.364				13095
15181	-11	3989	8.5	M3	38 24.856	0.07	2	70.747	-11 42 33.11	0.46	2	70.747				13096
15182	-28	11499	7.57	M2	15 38 28.656	0.10	4	70.326	-29 08 23.45	0.22	4	70.326		21082		13097
15183	-34	10487	8.3	F2	38 41.411	0.22	4	69.850	-34 43 45.40	0.10	4	69.850				13098
15184	-2	4034	7.9	G5	38 48.437	0.15	2	71.506	-2 28 30.74	0.02	2	71.506				13100
15185	-25	11038	8.6	G5	38 48.554	0.08	4	69.420	-25 59 23.51	0.14	4	69.420				13099
15186p	-57	7155	7.5	*	38 56.469	0.10	4	68.859	-57 57 21.13	0.04	4	68.859				13101
15187	-49	9909	6.06	K0	15 38 59.397	0.08	6	69.258	-49 19 49.82	0.14	6	69.258	3241	21092	3526	33241
15188	-19	4188	4.96	K5	39 03.575	0.02	106	71.508	-19 31 07.73	0.03	103	71.471	1413	21094	3527	31413
15189	-5	4143	7.42	K0	39 05.502	0.02	2	71.482	-6 17 06.17	0.15	2	71.482		21095	3528	13102
15190	-12	4315	8.7	K0	39 07.455	0.03	2	71.900	-12 36 02.79	0.33	2	71.900				13103
15191	-50	9744	8.0	K0	39 12.056	0.14	4	68.865	-51 00 47.42	0.04	4	68.865				1867
15192	-15	4163	8.8	K0	15 39 12.977	0.07	2	71.452	-15 24 27.29	0.25	2	71.452				13104
15193	-37	10441	5.31	K0	39 22.767	0.15	6	69.806	-37 15 58.17	0.16	6	69.806	3242	21103	3530	33242
15194	-45	10145	8.7	K2	39 25.713	0.20	4	69.885	-45 54 01.88	0.17	4	69.885				1868
15195	+13	2982	5.26	A0p	39 26.139	0.11	6	69.937	+13 00 23.80	0.18	6	69.937	3243	21105		33243
15196	-34	10494	4.82	B5	39 29.367	0.07	6	70.709	-34 33 05.68	0.14	6	70.709		21106		21091
15197	-7	4082	7.9	K5	15 39 33.723	0.31	2	69.939	-7 45 19.61	0.02	2	69.939				13105
15198	-67	2940	9.1	K0	39 35.253	0.18	4	68.817	-68 12 34.68	0.17	4	68.817				19789
15199	-77	1149	9.2	F8	39 44.130	0.09	5	70.466	-77 16 39.95	0.10	4	70.273				19790
15199 SP					39 44.152	0.50	4	69.862	-77 16 40.06	0.25	4	69.862				19790
15200	-18	4136	7.7	K5	39 45.913	0.17	2	71.376	-18 26 54.50	0.14	2	71.376				13106
15201	-0	3001	8.4	K0	15 39 46.768	0.23	2	69.896	-1 15 02.64	0.05	2	69.896				13107
15202	-4	3953	8.3	K5	39 53.076	0.10	2	69.944	-4 59 00.81	0.11	2	69.944				13108
15203	-67	2942	9.1	K2	40 04.423	0.17	4	69.338	-67 50 42.15	0.08	4	69.338				19791
15204	-36	10360	8.5	M1	40 18.171	0.08	4	70.230	-37 00 42.08	0.06	4	70.230				13109
15205	-55	6679	6.97	B9	40 20.473	0.11	5	69.241	-56 00 28.10	0.08	5	69.241	3245	21122		33245
15206	-10	4149	7.26	F5	15 40 21.048	0.04	2	69.985	-10 46 22.84	0.09	2	69.985		21124		13112
15207	-12	4320	6.76	G0	40 22.118	0.10	2	71.384	-12 53 51.49	0.07	2	71.384		21123		13110
15208	-13	4232	8.0	G5	40 22.669	0.25	2	71.410	-13 23 47.67	0.27	2	71.410				13111
15209	+4	3051	7.5	G0	40 24.778	0.16	2	69.903	+4 15 36.15	0.03	2	69.903				13113
15210	-35	10466	9.1	F8	40 34.735	0.16	4	70.266	-35 19 02.65	0.10	4	70.266				13114
15211	-59	6268	8.2	F2	15 40 35.105	0.26	4	69.378	-60 04 52.86	0.05	4	69.378				13115
15212	-14	4266	6.44	K0	40 36.365	0.03	2	70.903	-14 53 05.42	0.02	2	70.903		21129	3531	13116
15213	-39	10118	8.7	G0	40 38.253	0.18	4	69.911	-39 19 29.29	0.14	4	69.911				13117
15214	-31	12214	7.8	K5	40 55.219	0.07	4	70.345	-32 09 45.01	0.09	4	70.345				13118
15215	-30	12489	7.48	K2	41 00.719	0.16	4	69.326	-30 33 15.35	0.06	4	69.326		21140		13119
15216	-34	10510	8.3	K5	15 41 04.277	0.15	5	70.353	-35 07 18.37	0.16	5	70.353				13120
15217	-56	6876	8.2	K0	41 05.926	0.19	4	69.442	-56 45 07.58	0.20	4	69.442				13121
15218	-16	4151	7.40	K0	41 06.733	0.05	2	70.951	-16 42 43.58	0.04	2	70.951		21142		13122
15219	-43	10172	7.5	K0	41 09.350	0.20	4	70.389	-43 53 32.19	0.13	4	70.389				1869
15220	+2	2987	7.6	K0	41 15.039	0.30	2	70.380	+2 35 49.70	0.13	2	70.380		21145		13123
15221	-15	4171	5.55	A5	15 41 15.300	0.10	6	69.450	-15 30 55.04	0.13	6	69.450	3246	21146		33246
15222	-19	4202	8.9	K5	41 19.312	0.16	2	71.472	-19 37 49.44	0.09	2	71.472				13124
15223	-69	2441	8.8	F2	41 24.246	0.08	4	70.215	-69 42 22.98	0.10	4	70.215				19792
15224	-49	9958	8.5	K0	41 28.663	0.23	4	70.279	-49 27 13.43	0.06	4	70.279				1870
15225	+2	2989	5.80	G5	41 30.643	0.10	6	69.994	+2 40 23.74	0.08	6	69.994	3248	21155	3535	33248
15226	-9	4216	8.8	G0	15 41 33.888	0.27	2	71.991	-9 44 26.26	0.01	2	71.991				13125
15227	-67	2948	9.1	K0	41 36.872	0.04	4	70.426	-67 14 45.94	0.06	4	70.426				19793
15228	-40	9884	9.1	G5	41 40.439	0.18	3	70.767	-40 41 07.03	0.06	3	70.767				1871
15229	-52	8827	8.4	K5	41 40.665	0.03	4	69.789	-52 24 38.48	0.06	4	69.789				13126
15230	-62	4838	8.65	K0	41 42.839	0.10	4	70.397	-62 16 23.55	0.14	4	70.397		21157		13127
15231	-33	10680	8.8	K5	15 41 43.989	0.23	4	70.609	-33 27 52.18	0.16	3	70.047				13128
15232	-2	4040	8.3	K2	41 44.147	0.09	2	71.423	-2 51 20.72	0.00	2	71.423				13129
15233	+6	3088	2.75	K0	41 48.346	0.02	115	72.064	+6 34 54.72	0.03	112	72.065	582	21158	3536	30582
15234	-53	6681	7.9	K0	41 48.385	0.12	4	69.676	-53 16 54.91	0.17	4	69.676				13130
15235	-41	10265	8.5	K0	41 48.842	0.11	4	70.602	-41 35 54.70	0.11	4	70.602				1872
15236	-21	4180	8.8	B3	15 42 00.825	0.05	6	70.765	-21 39 31.47	0.15	6	70.765				21092
15237	-22	4017	8.2	F8	42 14.291	0.05	5	70.098	-22 44 04.29	0.09	5	70.098				13131
15238	-53	6685	8.2	K0	42 16.255	0.13	4	70.288	-53 51 21.17	0.03	4	70.288				13132
15239	-42	10738	8.0	G5	42 20.445	0.15	4	70.833	-42 42 41.65	0.16	4	70.833				1873
15240	-45	10183	9.0	K0	42 21.287	0.12	4	70.812	-45 53 22.62	0.23	4	70.812				1874
15241	-33	10690	9.2	K2	15 42 21.786	0.20	4	71.443	-34 02 40.33	0.07	4	71.443				13133
15242	-18	4152	7.7	A3	42 30.975	0.09	2	69.935	-18 57 05.08	0.15	2	69.935				13134
15243	-29	11930	7.04	K0	42 40.803	0.17	5	71.097	-29 53 09.00	0.12	5	71.097		21168	3538	13135
15244	+5	3071	8.01	G0	42 46.048	0.04	2	70.394	+4 51 53.82	0.04	2	70.394		21172		13136
15245	-25	11070	7.3	K5	42 46.339	0.07	4	70.372	-25 20 24.39	0.09	4	70.372				13137
15246	-31	12247	8.9	K2	15 42 47.187	0.18	4	70.340	-31 51 42.36	0.12	4	70.340				13138
15247	+1	3124	8.3	K2	42 54.480	0.06	2	70.417	+1 41 16.89	0.10	2	70.417				13139
15248	-24	12276	8.5	K5	42 55.349	0.10	4	70.897	-24 24 14.08	0.14	4	70.897				13140
15249	-61	5252	7.5	K0	43 04.374	0.06	4	69.836	-61 59 35.85	0.19	4	69.836				13141
15250	+1	3125	6.46	K0	43 06.648	0.10	2	70.559	+1 02 46.76	0.08	2	70.559		21181		13142

15186 SDS, 10.0m, 5"6, 93°. M1+A3.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
15251	-46	10353	8.0	G5	15 43 08.361	0.22	4	70.331	-46 32 40.66	0.06	4	70.331				1875
15252	-27	10550	6.45	A5	43 09.714	0.06	4	70.678	-27 54 22.35	0.09	4	70.678	21182	3539		13143
15253	-35	10494	8.2	F5	43 12.885	0.25	4	70.256	-35 43 34.24	0.10	4	70.256				13144
15254	-47	10306	8.5	K5	43 17.743	0.28	4	69.857	-47 29 35.72	0.17	4	69.857				1876
15255	-15	4182	9.0	K0	43 34.207	0.21	2	71.919	-16 00 23.55	0.12	2	71.919				13145
15256	-1	3093	8.9	K5	15 43 36.597	0.25	2	71.930	-1 24 52.56	0.12	2	71.930				13146
15257	-36	10398	8.6	K2	43 44.418	0.08	4	70.310	-36 25 43.05	0.05	4	70.310				13147
15258	-55	6704	8.3	K2	43 46.081	0.14	4	69.840	-55 43 40.57	0.08	4	69.840				13148
15259	-71	1920	8.9	K2	43 47.822	0.15	4	69.322	-71 20 59.59	0.08	4	69.322				19794
15260	-44	10396	9.0	G5	43 47.915	0.09	3	69.687	-44 32 30.80	0.17	3	69.687				1877
15261	+15	2911	3.74	A2	15 43 52.752	0.03	119	71.070	+15 34 36.45	0.04	116	71.046	583	21194	3542	80583
15262	-3	3824	8.1	K5	43 53.144	0.16	2	71.471	-3 54 19.62	0.29	2	71.471		21196		13149
15263	-66	2827	8.9	K5	44 03.358	0.20	4	69.351	-66 50 11.78	0.05	4	69.351				19795
15264	-5	4161	6.36	K0	44 05.782	0.12	6	68.766	-5 57 57.91	0.10	6	68.766	3250	21203		33250
15265	-26	11036	8.3	K0	44 18.187	0.08	5	70.072	-26 56 00.36	0.10	5	70.072				13150
15266	-7	4100	8.6	A3	15 44 22.332	0.23	2	70.390	-7 18 20.88	0.03	2	70.390				13151
15267	-7	4101	7.7	K0	44 33.473	0.18	2	69.941	-8 17 56.24	0.09	2	69.941				13152
15268	-11	4010	8.1	G5	44 34.287	0.07	2	71.446	-12 04 03.10	0.49	2	71.446				13153
15269	-20	4323	8.2	G5	44 35.931	0.02	4	70.285	-21 04 47.92	0.13	4	70.285				13154
15270	-9	4230	7.8	K5	44 38.523	0.03	3	72.111	-10 08 31.31	0.04	3	72.111				13155
15271	-48	10324	8.0	K2	15 44 38.893	0.11	4	70.294	-49 05 07.60	0.06	4	70.294				1878
15272	-37	10504	8.9	G5	44 39.638	0.19	4	70.309	-37 52 50.99	0.13	4	70.309				13156
15273	-50	9860	8.0	K5	44 41.011	0.09	4	69.894	-50 25 35.33	0.17	4	69.894				1879
15274	+0	3401	7.23	F5	44 43.601	0.12	2	70.388	-0 06 57.83	0.24	2	70.388	21215			13158
15275	-4	3975	8.0	G5	44 43.784	0.11	2	71.885	-4 57 54.90	0.16	2	71.885				13157
15276	-78	1053	9.1	A0	15 44 46.420	0.10	4	70.306	-78 33 49.67	0.16	4	70.306				19796
15276 SP					44 46.378	0.07	4	70.409	-78 33 49.71	0.19	4	70.409				19796
15277	-0	3008	8.6	G5	44 49.471	0.16	2	71.910	-0 54 36.28	0.03	2	71.910				13159
15278	-33	10714	8.7	K2	44 53.257	0.12	4	70.285	-33 20 35.23	0.08	4	70.285				13160
15279	+1	3131	6.66	K0	44 54.620	0.03	2	70.996	+1 41 58.72	0.07	2	70.996	21220			13161
15280	-24	12296	7.26	A0	15 45 03.362	0.10	5	70.712	-25 03 44.15	0.10	5	70.712				13162
15281	-79	867	8.09	A0	45 08.561	0.10	4	69.434	-79 15 10.92	0.15	4	69.434	21228	3544		19797
15281 SP					45 08.562	0.25	4	69.489	-79 15 10.75	0.15	4	69.489	21228	3544		19797
15282	+4	3062	7.20	K0	45 18.843	0.08	2	69.946	+4 27 05.33	0.19	2	69.946	21231			13163
15283	+4	3061	8.2	K0	45 20.057	0.06	2	69.962	+3 41 46.01	0.06	2	69.962				13164
15284	-51	9521	7.33	M0	15 45 27.934	0.03	4	69.406	-52 03 48.49	0.07	4	69.406	21234			1880
15285	-23	12525	6.66	A0	45 28.356	0.03	5	70.833	-23 40 52.49	0.15	5	70.833	21235	3545		13166
15286	-19	4221	8.7	K0	45 28.364	0.17	4	69.935	-20 14 33.29	0.07	4	69.935				13165
15287	-17	4427	8.4	K0	45 29.361	0.45	2	71.875	-18 17 09.73	0.10	2	71.875				13167
15288	-13	4252	7.02	K0	45 37.905	0.23	2	71.453	-13 20 47.70	0.15	2	71.453	21240	3546		13168
15289	-38	10672	8.2	K5	15 45 37.934	0.10	4	69.831	-38 27 36.44	0.07	4	69.831				13169
15290	-49	10030	9.2	M0	45 47.988	0.18	4	69.874	-49 51 57.88	0.14	4	69.874				1881
15291	-35	10526	9.4	A0	45 59.630	0.12	4	70.340	-35 52 34.09	0.20	4	70.340				13170
15292	-58	6357	7.6	K0	46 16.323	0.09	4	68.835	-58 21 01.75	0.15	4	68.835				13171
15293	-52	8944	5.96	B8	46 18.612	0.10	6	70.783	-53 03 28.85	0.22	6	70.783	21250	3549		21093
15294	-36	10434	8.7	K2	15 46 19.083	0.13	4	70.600	-36 27 58.35	0.18	3	70.035				13172
15295	-28	11599	8.5	K5	46 24.170	0.12	4	69.442	-28 45 19.29	0.11	4	69.442				13173
15296	+0	3405	8.5	K5	46 26.245	0.46	2	71.897	+0 21 42.67	0.26	2	71.897				13174
15297	+18	3074	4.28	K5	46 29.134	0.08	19	70.836	+18 17 39.20	0.06	19	70.836	584	21255	3551	30584
15298	-75	1261	7.9	K2	46 32.751	0.16	5	71.412	-75 59 57.02	0.10	5	71.412				19798
15298 SP					46 32.650	0.31	4	70.367	-75 59 56.46	0.60	4	70.367				19798
15299	-1	3103	8.2	A0	46 36.204	0.19	3	72.122	-1 50 10.34	0.05	3	72.122				13175
15300	-50	9886	8.0	G5	46 37.169	0.23	4	68.867	-50 36 09.01	0.10	4	68.867				1882
15301	-4	3982	8.0	B9	46 39.272	0.04	2	71.951	-4 48 35.72	0.14	2	71.951				13176
15302	-46	10410	7.83	K0	46 42.556	0.16	3	70.661	-46 52 21.68	0.11	3	70.661	21261			1883
15303	-20	4332	7.8	B8	15 46 45.301	0.12	6	71.466	-20 37 33.94	0.07	6	71.466				21094
15304p	-45	10251	6.21	A5	46 45.637	0.14	5	69.934	-45 15 00.99	0.15	5	69.934	3251	21263	3554	33251
15305	-14	4286	9.0	F0	46 46.662	0.07	2	70.435	-14 23 21.31	0.06	2	70.435				13177
15306	-41	10347	8.5	F5	46 48.541	0.32	4	71.074	-41 45 14.14	0.34	4	71.074				1884
15307	-63	3697	7.80	F8	46 58.869	0.08	4	68.850	-64 01 52.50	0.13	4	68.850	21267			13178
15308	-24	12314	8.7	A5	15 46 59.770	0.07	4	71.057	-24 59 58.74	0.06	4	71.057				13179
15309	-2	4052	3.63	A0	47 00.329	0.03	75	71.248	-2 36 43.42	0.03	74	71.248	585	21269	3556	80585
15310	-17	4431	6.69	F2	47 00.418	0.06	2	70.440	-17 45 02.64	0.28	2	70.440	21268	3555		13180
15311	-21	4197	7.74	K0	47 00.776	0.07	4	70.187	-21 20 21.89	0.08	4	70.187	21270			13181
15312	-44	10435	8.2	G5	47 05.291	0.06	4	71.034	-44 24 50.45	0.13	4	71.034				1885
15313	-10	4174	8.6	K0	15 47 15.721	0.43	2	72.456	-10 54 35.68	0.33	2	72.456				13182
15314	+2	3004	7.6	A2	47 20.372	0.05	3	72.730	+2 39 06.70	0.20	3	72.730				13183
15315	-8	4089	8.4	K0	47 24.631	0.02	2	72.284	-9 16 37.42	0.18	2	72.284				13184
15316	-64	3281	8.9	K5	47 25.246	0.14	4	68.921	-64 46 21.74	0.24	4	68.921				19799
15317	-11	4014	8.4	F5	47 28.129	0.08	2	70.873	-11 24 49.98	0.09	2	70.873				13185
15318	-22	4033	8.7	K0	15 47 29.229	0.11	5	71.110	-22 43 17.84	0.20	5	71.110				13186
15319	+26	2737	4.73	G5	47 29.602	0.22	6	69.818	+26 13 11.68	0.26	6	69.818	3252	21276		33252
15320	-51	9557	9.0	K2	47 29.842	0.09	4	69.622	-51 38 18.14	0.33	4	69.622				1886
15321	-25	11125	6.67	K0	47 33.581	0.06	4	70.603	-26 08 19.76	0.09	4	70.603	21277			13187
15322	-30	12581	8.8	G5	47 36.129	0.16	4	70.715	-30 28 00.19	0.15	4	70.715				13188

15252 A 9775, 7.2m-7.2m, 0°6, 172°.

15304 SDS, 11.0m, 2°6, 178°.

CATALOG OF 23,001 STARS FOR 1950.0

447

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15323	-16	4164	8.3	K5	15 47 37.416	0.10	2	69.906	-17 11 53.44	0.10	2	69.906				13189
15324*	-34	10552	8.4	F5	47 43.145	0.13	4	71.415	-34 53 50.61	0.11	4	71.415				13190
15325	-33	10754	4.11	B9	47 46.457	0.03	74	71.664	-33 28 35.94	0.04	72	71.632	586	21281	3559	30586
15326	-37	10539	8.9	K0	47 46.575	0.05	4	71.305	-37 36 38.77	0.09	4	71.305				13191
15327	-2	4055	8.5	F2	47 46.949	0.12	2	70.796	-2 54 16.82	0.31	2	70.796				13192
15328	-75	1262	9.1	K0	15 47 50.400	0.07	4	69.856	-75 15 23.77	0.27	4	69.856				19800
15328 SP					47 50.612	0.49	4	70.289	-75 15 23.26	0.60	4	70.289				19800
15329	-12	4346	8.7	G5	47 52.481	0.01	2	72.871	-13 14 41.85	0.17	2	72.871				13193
15330	-48	10377	8.0	G5	47 56.528	0.11	4	71.052	-48 27 23.25	0.10	4	71.052				1887
15331	-25	11131	4.77	B3	47 57.928	0.12	6	71.877	-25 36 03.43	0.06	6	71.877	21285			21095
15332	-47	10383	8.5	K0	15 48 05.778	0.25	4	70.889	-47 13 55.03	0.42	3	70.421				1888
15333	-22	4036	8.0	F5	48 08.238	0.12	4	70.398	-22 28 34.98	0.12	4	70.398				13194
15334	-32	11180	8.8	K2	48 17.029	0.10	4	70.926	-32 34 45.88	0.30	4	70.926				13195
15335	-5	4178	8.3	G0	48 17.365	0.04	2	72.894	-6 10 42.29	0.38	2	72.894				13196
15336	+4	3069	3.75	A2	48 19.431	0.05	22	71.457	+4 37 38.02	0.06	23	71.459	588	21288	3560	30588
15337	-44	10458	9.1	K5	15 48 19.572	0.12	4	70.853	-45 09 41.03	0.13	4	70.853				1889
15338	-37	10548	8.9	M1	48 23.234	0.07	4	70.172	-38 00 31.07	0.07	4	70.172				13197
15339	+3	3088	8.9	F5	48 28.223	0.13	2	71.970	+3 02 00.87	0.25	2	71.970				13198
15340	-20	4343	8.2	B9	48 34.976	0.04	6	70.985	-20 26 15.88	0.04	6	70.985				21096
15341	-77	1170	7.42	K0	48 35.957	0.12	4	70.896	-77 35 04.40	0.15	4	70.896	21298			19801
15341 SP					15 48 35.994	0.30	4	69.650	-77 35 04.98	0.71	4	69.650	21298			19801
15342	-55	6741	8.0	K0	48 39.356	0.08	4	69.853	-55 24 24.34	0.12	4	69.853				13199
15343	-30	12601	9.0	K0	48 40.082	0.10	4	69.983	-31 04 35.30	0.13	4	69.983				13200
15344	-18	4182	7.0	K0	48 45.075	0.04	3	72.141	-18 47 23.32	0.07	3	72.141				13201
15345	-53	6724	7.9	K0	48 48.752	0.11	4	70.301	-53 17 19.13	0.07	4	70.301				13202
15346	-13	4269	6.25	G0	15 48 50.543	0.17	2	71.921	-13 59 02.89	0.12	2	71.921	21305			13203
15347	-53	6723	7.43	K5	48 50.710	0.13	4	70.616	-54 05 34.77	0.16	4	70.616	21306			13204
15348	-81	741	8.5	M1	48 54.749	0.16	5	70.902	-81 22 43.73	0.13	5	70.902				19802
15348 SP					48 54.675	0.13	4	70.289	-81 22 43.62	0.27	4	70.289				19802
15349	-43	10322	9.0	K0	48 56.344	0.27	4	70.497	-43 29 49.74	0.19	4	70.497				1890
15350	-60	6159	8.7	K0	15 48 57.146	0.17	4	69.403	-60 34 51.34	0.03	4	69.403				13205
15351	-57	7286	8.2	K5	48 58.332	0.18	4	70.453	-57 26 08.18	0.07	4	70.453				13206
15352	-58	6411	8.8	K5	49 00.336	0.10	4	70.617	-58 54 41.51	0.10	4	70.617				13207
15353	-29	12030	6.43	K0	49 06.973	0.08	4	69.874	-29 44 12.77	0.17	4	69.874	21313	3562		13208
15354	-7	4118	7.3	K2	49 08.270	0.17	3	71.183	-7 53 39.54	0.17	3	71.183				13209
15355*	-12	4353	7.49	F2	15 49 10.767	0.31	2	70.369	-12 23 18.42	0.16	2	70.369				13210
15356	-62	4992	8.7	K0	49 14.907	0.19	4	70.859	-63 01 36.69	0.30	4	70.859				13211
15357	-42	10860	8.5	F5	49 26.901	0.13	4	69.849	-43 07 00.83	0.20	4	69.849				1891
15358	-1	3109	8.0	G5	49 58.361	0.20	2	71.439	-1 45 29.48	0.48	2	71.439				13212
15359	-0	3025	8.3	K2	49 59.560	0.19	2	71.366	-1 10 55.04	0.06	2	71.366				13213
15360	-0	3026	7.9	A0	15 50 00.364	0.11	2	69.946	-0 52 58.38	0.19	2	69.946			3565	13214
15361*	-65	3165	7.5	G0	50 08.197	0.11	4	70.328	-65 45 15.70	0.04	4	70.328				19803
15362	-80	788	8.0	K5	50 14.299	0.25	4	70.829	-80 36 36.86	0.14	4	70.829				19804
15362 SP					50 14.283	0.08	4	69.150	-80 36 37.10	0.25	4	69.150				19804
15363	-38	10719	9.0	G5	50 16.574	0.06	4	69.714	-39 12 33.02	0.08	4	69.714				13215
15364	-27	10623	8.4	K2	15 50 24.767	0.04	4	69.337	-27 32 34.36	0.03	4	69.337				13216
15365	-19	4249	5.06	B3	50 25.584	0.02	83	71.184	-20 01 09.16	0.03	81	71.171	1415	21327	3566	31415
15366	-18	4189	8.7	F8	50 27.226	0.50	2	72.350	-19 15 01.92	0.19	2	72.350				13217
15367	-14	4298	7.9	F8	50 29.106	0.01	2	70.403	-14 34 06.68	0.38	2	70.403			3567	13218
15368	-68	2585	5.20	K0	50 31.342	0.09	6	69.192	-68 27 22.83	0.15	6	69.192	3253	21328	3568	33253
15369*	-24	12352	4.66	B3	15 50 36.222	0.08	6	71.078	-25 10 46.24	0.15	6	71.078				21097
15370	-36	10497	8.6	K5	50 36.744	0.15	4	69.731	-36 48 52.02	0.06	4	69.731				13219
15371	-63	3723	3.04	F0	50 42.364	0.02	102	71.203	-63 16 51.21	0.03	102	71.203	589	21332	3569	30589
15372	-2	4064	7.36	F5	50 46.120	0.18	2	71.891	-2 52 52.79	0.07	1	71.485			3570	13220
15373	-72	1885	8.3	G5	50 50.202	0.05	4	70.629	-72 39 18.05	0.07	4	70.629				19805
15374	+4	3074	8.4	G5	15 50 50.568	0.26	2	72.351	+4 24 02.20	0.03	2	72.351				13221
15375	+13	3024	6.16	G0	50 52.016	0.09	6	68.854	+13 20 56.46	0.10	6	68.854	3254	21337		33254
15376	-7	4130	8.3	G5	50 52.080	0.24	2	72.377	-7 19 20.67	0.09	2	72.377				13222
15377	-1	3113	8.9	K5	50 53.805	0.14	3	72.605	-1 48 08.85	0.13	3	72.605				13223
15378	-24	12354	5.44	B5	50 54.372	0.09	6	72.190	-24 23 09.14	0.03	5	71.944			21339	21098
15379	-31	12377	8.7	G0	15 50 56.251	0.15	4	70.521	-31 55 07.40	0.09	4	70.521				13224
15380	-23	12569	5.36	B3	50 56.956	0.14	5	72.043	-23 49 50.87	0.31	5	72.043	21341			21099
15381	-40	10043	8.0	G5	51 01.258	0.21	4	69.765	-41 01 34.44	0.15	4	69.765				1892
15382	-71	1934	8.9	K5	51 01.609	0.12	4	70.805	-71 48 39.29	0.16	4	70.805				19806
15383	-4	3995	8.0	G0	51 01.741	0.16	2	71.977	-4 20 26.76	0.12	2	71.977				13225
15384	-18	4191	7.0	M1	15 51 03.091	0.38	2	72.458	-18 48 14.05	0.37	2	72.458				13226
15385	-34	10586	9.4	G5	51 03.669	0.09	4	69.769	-34 15 13.82	0.12	4	69.769				13227
15386	-69	2464	8.8	K0	51 03.709	0.11	4	71.272	-69 14 56.18	0.21	4	71.272				19807
15387	+0	3423	8.9	K0	51 06.923	0.31	2	72.736	+0 26 39.98	0.00	2	72.736				13228
15388	-11	4028	8.8	K2	51 11.427	0.10	4	71.884	-11 57 47.14	0.15	4	71.884				13229
15389	-70	2137	8.3	F2	15 51 16.803	0.10	5	71.179	-70 46 25.83	0.28	4	70.929				19808
15390	-15	4209	8.9	K0	51 20.640	0.02	2	70.744	-15 31 03.43	0.08	2	70.744				13230
15391	-26	11096	6.01	B5	51 27.082	0.09	5	71.734	-27 11 30.65	0.07	5	71.734	21352			21100
15392	-10	4195	7.10	K0	51 28.867	0.04	2	70.735	-10 56 36.40	0.06	2	70.735	21353			13231
15393	-52	9072	8.6	K2	51 29.208	0.08	4	69.719	-52 29 45.14	0.14	4	69.719				13232

15324 SDS, 9.0m-9.4m, 0°8, 104°.
 15355 A 9612, 8.2m-8.4m, 0°4, 74°.

15361 SDS, 8.9m-9.1m, 0°8, 129°.
 15369 A 9623, 7.4m, 2°5, 274°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15394	-66°	2849	8.9	K2	15 51 34.944	0.09	5	71.374	-66° 16' 40.46	0.24	5	71.374				19809
15395	-24	12365	5.93	B8	51 39.084	0.11	4	70.303	-25 05 49.69	0.10	4	70.303		21355	3573	13233
15396	-22	4046	6.73	B8	51 44.061	0.06	6	71.622	-22 37 11.46	0.19	6	71.622		21356		21101
15397	-56	7033	8.8	K2	51 49.231	0.13	4	70.768	-56 47 35.72	0.11	4	70.768				13234
15398	+ 2	3020	8.0	K5	51 55.807	0.05	2	71.869	+ 2 17 20.08	0.44	2	71.869				13235
15399*	-18	4195	5.90	B5	15 52 06.695	0.09	6	70.928	-19 14 12.59	0.19	6	70.928		21364		21102
15400	-25	11186	8.1	K0	52 11.150	0.15	4	69.639	-25 37 59.63	0.21	4	69.639				13236
15401	+ 9	3116	6.20	A2	52 15.150	0.13	6	71.439	+ 8 43 34.91	0.25	6	71.439	3256	21367		33256
15402	-33	10810	9.2	K0	52 17.784	0.16	5	70.077	-33 15 20.17	0.12	4	70.268				13237
15403	-22	4052	8.5	A2	52 19.328	0.10	4	69.873	-23 13 18.73	0.16	4	69.873				13238
15404	-46	10480	9.0	F8	15 52 20.379	0.07	4	69.841	-46 27 58.94	0.12	4	69.841				1893
15405	+20	3166	5.76	K5	52 22.132	0.09	5	71.266	+20 27 23.57	0.22	5	71.266	3257	21368	3575	33257
15406	-28	11690	8.3	K2	52 26.371	0.04	5	70.363	-29 02 41.25	0.05	4	70.144				13239
15407	-67	2995	9.1	K0	52 34.970	0.13	5	70.153	-67 41 38.85	0.06	4	70.308				19810
15408	-35	10590	7.83	G5	52 36.027	0.09	4	69.872	-35 31 51.17	0.07	4	69.872		21373		13240
15409	-27	10651	8.21	F0	15 52 40.459	0.11	4	69.759	-28 12 54.42	0.07	4	69.759		21375		13241
15410	-59	6454	7.8	G5	52 48.648	0.07	4	70.418	-59 16 20.06	0.05	4	70.418				13242
15411	-67	2996	8.0	K2	52 50.927	0.09	4	69.840	-68 11 41.78	0.11	4	69.840				19811
15412	- 3	3846	8.5	K5	52 52.269	0.59	2	69.944	- 4 16 08.07	0.19	2	69.944				13243
15413	-38	10752	8.6	K0	52 52.899	0.17	4	70.288	-38 41 56.72	0.05	4	70.288				13244
15414	-40	10073	9.2	K0	15 52 55.936	0.18	4	69.902	-40 23 08.91	0.10	4	69.902				1894
15415	-17	4450	8.1	K0	52 57.570	0.16	2	71.874	-17 53 05.11	-	1	71.452			3577	13245
15416	- 8	4106	7.19	G5	52 59.884	0.08	2	70.894	- 8 30 07.30	0.17	2	70.894		21384		13246
15417	+ 4	3082	8.3	K5	53 17.824	0.07	2	71.407	+ 4 28 44.57	0.14	2	71.407				13247
15418	+ 3	3099	8.7	G5	53 26.511	0.01	2	70.497	+ 2 59 35.96	0.59	2	70.497				13248
15419	- 9	4260	8.4	K0	15 53 29.008	0.10	2	70.977	- 9 34 41.84	0.10	2	70.977				13249
15420	-21	4229	8.2	K0	53 41.038	0.21	5	70.421	-21 39 27.38	0.11	5	70.421				13250
15421	-20	4363	8.7	G5	53 42.297	0.12	4	69.945	-20 17 10.28	0.11	4	69.945				13251
15422	-83	590	8.5	A0	53 44.318	0.09	4	69.359	-83 38 14.02	0.26	4	69.359				19812
15422 SP					53 43.867	0.08	4	69.677	-83 38 13.19	0.46	4	69.677				19812
15423	-28	11714	4.02	B3	15 53 47.464	0.10	6	68.790	-29 04 10.94	0.21	6	68.790	3258	21398		33258
15424	-58	6512	8.7	K0	53 47.893	0.12	4	68.872	-58 32 39.20	0.21	4	68.872				13252
15425	-30	12680	8.9	K5	53 52.051	0.12	4	69.555	-30 48 20.79	0.04	4	69.555				13253
15426	-74	1509	7.8	K2	53 55.972	0.07	4	70.066	-74 27 45.36	0.20	4	70.066				19813
15427	-13	4293	7.8	K0	53 58.020	0.18	2	69.937	-13 25 53.91	0.03	2	69.937				13254
15428	-41	10456	8.5	F2	15 53 58.158	0.11	4	69.825	-41 39 12.93	0.31	4	69.825				1895
15429	-36	10534	9.2	F8	54 05.041	0.11	3	69.675	-37 02 34.40	0.09	3	69.675				13255
15430	+16	2849	3.86	F5	54 08.886	0.05	29	70.778	+15 48 57.91	0.08	29	70.778	591	21408	3579	30591
15431	-13	4296	9.0	K0	54 13.372	0.47	2	71.884	-14 14 14.94	0.10	2	71.884				13256
15432	-55	6845	8.4	G5	54 14.179	0.07	4	68.901	-56 05 05.52	0.17	4	68.901				13257
15433	-41	10461	9.1	K0	15 54 16.115	0.19	4	70.336	-42 10 20.19	0.18	4	70.336				1896
15434	-21	4233	6.96	B9	54 16.487	0.07	7	71.028	-21 20 30.96	0.14	7	71.028		21413		21103
15435	-10	4211	7.5	K0	54 23.262	0.32	2	71.420	-10 44 39.01	0.23	2	71.420				13258
15436	- 2	4077	8.3	A0	54 26.198	0.01	2	71.910	- 2 50 42.16	0.09	2	71.910				13259
15437	- 0	3040	7.7	K5	54 26.420	0.12	2	70.416	- 0 36 05.54	0.10	2	70.416				13260
15438	- 6	4317	8.1	A5	15 54 26.963	0.21	2	71.921	- 6 41 03.89	0.07	2	71.921				13261
15439	-60	6242	7.3	K2	54 28.161	0.10	4	69.352	-60 33 52.18	0.17	4	69.352				13262
15440	- 5	4199	7.01	A0	54 28.602	0.23	2	71.923	- 6 09 10.83	0.61	2	71.923		21416		13263
15441	-47	10471	9.4	G5	54 29.730	0.15	4	71.103	-48 05 31.39	0.08	4	71.103				1897
15442	- 4	4007	7.8	F5	54 30.213	0.23	2	71.903	- 5 15 16.88	0.11	2	71.903				13264
15443	-38	10770	8.9	K0	15 54 37.381	0.11	4	70.840	-38 53 37.10	0.09	4	70.840				13265
15444	-32	11285	9.3	K0	54 39.989	0.11	4	70.551	-32 19 42.40	0.33	4	70.551				13266
15445f	+ 3	3104	7.01	A0	54 44.675	0.13	2	70.422	+ 3 32 55.23	0.05	2	70.422		21419		13267
15446	-20	4364	5.87	B5	54 44.807	0.10	7	71.512	-20 50 23.12	0.07	6	71.558		21420		21104
15447	-44	10530	9.58	K5	54 46.007	0.11	4	70.869	-45 09 55.55	0.25	4	70.869		21421		1898
15448	-51	9657	8.5	K2	15 54 49.375	0.16	4	70.065	-51 37 42.68	0.18	4	70.065				1899
15449	-73	1679	8.2	K0	54 49.901	0.19	4	70.570	-73 28 00.62	0.21	4	70.570				19814
15450	-23	12597	6.68	B9	54 50.160	0.13	6	72.216	-23 23 02.95	0.11	6	72.216		21422		21105
15451	-16	4183	8.7	K0	54 50.299	0.08	2	71.475	-16 40 03.44	0.10	2	71.475				13268
15452	-52	9128	8.8	K0	55 06.958	0.06	4	69.959	-52 57 05.87	0.11	4	69.959				13269
15453	-48	10472	8.5	B9	15 55 12.193	0.06	4	70.924	-48 58 10.59	0.06	3	70.467				1900
15454	+ 3	3105	8.9	K0	55 13.271	0.13	2	71.532	+ 3 31 12.85	0.22	2	71.532				13270
15455	- 4	4011	9.0	M0	55 17.630	0.27	2	72.433	- 4 19 00.96	0.08	2	72.433				13271
15456	-44	10538	8.27	G5	55 19.635	0.07	5	71.798	-44 48 54.49	0.14	4	71.703		21438		1901
15457	-62	5075	8.9	G5	55 20.391	0.19	4	70.881	-62 29 28.71	0.12	4	70.881				13272
15458	-53	6896	8.4	K5	15 55 21.965	0.08	4	69.546	-53 30 34.92	0.18	4	69.546				13273
15459	-13	4302	4.68	B3p	55 23.086	0.04	29	71.529	-14 08 12.02	0.05	28	71.540	1417	21439	3582	31417
15460	+27	2558	4.22	K0	55 30.790	0.03	41	71.113	+27 01 16.04	0.06	40	71.055	593	21440	3583	80593
15461	-54	6889	7.91	K5	55 32.611	0.19	4	70.881	-54 25 45.73	0.14	4	70.881		21441		13274
15462	-24	12427	5.41	B8	55 34.619	0.15	6	71.599	-24 41 20.16	0.22	6	71.599		21442		21106
15463	-25	11224	8.7	K0	15 55 35.607	0.05	4	69.424	-25 20 23.81	0.06	4	69.424				13275
15464	-49	10215	8.5	K5	55 47.734	0.14	5	71.031	-49 28 02.36	0.11	5	71.031				1902
15465	-25	11228	3.00	B2	55 49.268	0.04	25	71.160	-25 58 18.80	0.05	25	71.160	592	21447	3584	30592
15466	-26	11133	8.7	K0	55 50.349	0.10	4	70.346	-26 48 40.73	0.11	4	70.346				13276
15467	-19	4273	8.8	K0	55 51.658	0.16	2	72.458	-19 24 05.56	0.01	2	72.458				13277

15399 A 9834, 6.1m-8.1m, 0°5, 129°.

15445 A 9855, 8.7m, 11°0, 320°.

CATALOG OF 23,001 STARS FOR 1950.0

449

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15468	+ 5	3117	7.8	K0	15 55 59.847	0.12	2	71.522	+ 4 53 48.97	0.43	2	71.522				13278
15469	-50	10047	9.0	K2	56 04.229	0.06	5	70.845	-50 57 35.21	0.12	4	71.173				1903
15470	-41	10478	5.07	G5	56 05.341	0.04	51	71.205	-41 36 09.90	0.04	51	71.205	1418	21451	3585	31418
15471	-12	4384	8.3	K2	56 09.797	0.01	2	72.474	-13 01 40.50	0.18	2	72.474				13279
15472p	-65	3193	8.4	G0	56 15.226	0.15	4	71.127	-65 45 18.20	0.26	4	71.127				19815
15473	-15	4228	8.3	F5	15 56 23.227	0.09	2	70.773	-16 04 49.11	0.21	2	70.773				13280
15474	-26	11140	7.07	G5	56 24.581	0.19	4	69.884	-26 52 29.46	0.09	4	69.884		21459		13281
15475	-10	4216	8.4	K0	56 28.203	0.01	2	72.791	-10 48 09.69	0.09	2	72.791				13282
15476	-29	12159	7.14	A2	56 32.669	0.09	4	70.189	-29 56 30.90	0.21	4	70.189		21464		13283
15477	- 8	4123	8.4	G0	56 33.301	0.01	2	72.927	- 8 36 40.43	0.22	2	72.927				13284
15478	-32	11319	8.2	K0	15 56 41.137	0.21	4	71.260	-32 31 11.21	0.25	4	71.260				13285
15479	-51	9696	9.0	K2	56 43.289	0.06	4	69.975	-52 07 26.59	0.17	4	69.975				1904
15480	-57	7453	8.5	K0	56 46.729	0.15	4	70.368	-57 28 14.47	0.10	4	70.368				13286
15481	-38	10797	3.64	B3	56 48.021	0.12	6	71.452	-38 15 20.37	0.04	6	71.452		21478	3587	21107
15482	-31	12445	8.8	K0	56 50.882	0.08	5	70.827	-31 17 13.73	0.10	4	70.724				13287
15483	-43	10452	7.62	K0	15 56 52.905	0.22	4	70.813	-43 40 55.40	0.07	4	70.813		21481		1905
15484	-36	10573	9.1	K0	56 53.415	0.23	4	71.068	-37 07 58.98	0.12	4	71.068				13288
15485	-55	6916	8.3	K0	57 05.792	0.27	4	70.293	-55 29 29.06	0.14	4	70.293				13289
15486	-33	10855	8.8	K0	57 06.526	0.18	4	71.248	-33 27 42.28	0.04	4	71.248				13290
15487	- 5	4210	7.42	K0	57 06.921	0.00	2	70.792	- 5 59 11.38	0.41	2	70.792		21487	3588	13291
15488	- 6	4331	7.9	K2	15 57 11.009	0.10	2	70.785	- 6 53 09.67	0.10	2	70.785				13292
15489	-22	4068	2.54	B0	57 22.287	0.05	33	71.444	-22 28 52.01	0.05	32	71.382	594	21489	3589	30594
15490	-63	3772	8.7	F8	57 26.145	0.19	4	68.936	-63 38 18.59	0.02	4	68.936				13293
15491	+ 1	3154	7.54	K5	57 29.074	0.26	2	72.432	+ 0 45 50.69	0.02	2	72.432		21493	3590	13294
15492	-16	4196	5.53	F8	57 30.012	0.02	74	71.530	-16 23 23.66	0.03	74	71.530	1419	21495	3591	81419
15493	-45	10378	8.82	B9	15 57 36.169	0.14	4	70.429	-45 13 16.45	0.08	3	69.846		21498		1906
15494	-35	10653	8.0	K0	57 38.992	0.20	4	70.837	-35 51 16.57	0.02	3	70.351				13295
15495	-39	10280	9.0	G0	57 39.510	0.23	4	70.713	-39 33 45.03	0.13	4	70.713				13296
15496	-50	10069	8.5	K5	57 56.053	0.15	4	68.857	-50 48 51.30	0.19	4	68.857				1907
15497	-30	12740	8.7	F8	57 56.525	0.11	4	70.303	-30 26 07.70	0.08	4	70.303				13297
15498	+ 5	3123	8.4	K5	15 58 04.372	0.15	2	71.523	+ 4 52 01.25	0.33	2	71.523				13298
15499	- 7	4162	5.55	A0	58 05.409	0.04	26	71.859	- 8 16 17.36	0.06	26	71.859	1420	21502	3592	31420
15500	-27	10709	8.5	K2	58 06.319	0.06	4	70.320	-28 11 35.61	0.17	4	70.320				13299
15501	-23	12631	7.8	K2	58 08.315	0.13	5	71.085	-24 07 37.06	0.11	5	71.085				13300
15502	-20	4380	7.6	K0	58 09.821	0.17	4	70.913	-21 00 57.12	0.08	4	70.913				13301
15503	-21	4250	8.4	F0	15 58 10.878	0.11	4	70.425	-22 01 43.02	0.19	4	70.425				13302
15504	-11	4044	8.1	A0	58 12.209	0.18	3	71.052	-12 11 50.17	0.06	3	71.052				13303
15505	-37	10649	8.8	K0	58 12.860	0.30	4	69.887	-38 04 19.97	0.16	4	69.887				13304
15506	-14	4329	8.8	F5	58 13.802	0.23	2	71.915	-14 17 01.34	0.11	2	71.915				13305
15507	-12	4393	8.8	F5	58 13.926	0.15	2	72.266	-12 44 02.69	0.38	2	72.266				13306
15508	-50	10074	6.75	B8	15 58 19.091	0.08	7	69.772	-50 58 53.96	0.10	6	70.036	3261	21505	3593	33261
15509	+ 4	3096	5.90	K0	58 21.989	0.12	6	69.810	+ 4 33 58.66	0.09	6	69.810	3262	21508	3594	33262
15510	-24	12458	8.6	A2	58 25.746	0.12	4	70.358	-25 03 32.37	0.17	4	70.358				13307
15511	-76	1130	7.67	K2	58 33.143	0.18	4	69.942	-77 05 59.08	0.06	4	69.942		21511		19816
15511 SP					58 33.230	0.10	4	69.138	-77 05 58.98	0.28	4	69.138		21511		19816
15512	-34	10688	7.66	K5	15 58 33.651	0.10	4	69.871	-34 29 17.16	0.13	4	69.871		21512		13308
15513	+ 2	3030	8.6	K0	58 57.023	0.10	2	70.376	+ 2 12 11.84	0.17	2	70.376				13309
15514	-21	4255	7.3	B9	58 58.399	0.05	7	72.068	-21 50 29.41	0.12	7	72.068				21108
15515	+18	3101	5.28	G5	58 59.299	0.08	5	71.952	+17 57 22.67	0.31	5	71.952	3263	21525	3596	33263
15516	-34	10692	8.6	F0	59 03.896	0.12	4	69.896	-35 07 52.34	0.11	4	69.896				13310
15517	-64	3353	7.4	K0	15 59 06.425	0.10	4	68.850	-64 19 38.10	0.10	4	68.850				19817
15518	-10	4227	8.9	K5	59 15.132	0.29	2	71.892	-11 09 13.07	0.12	2	71.892				13311
15519	-22	4071	8.0	B9	59 15.649	0.05	6	70.896	-22 32 56.22	0.11	6	70.896				21109
15520	-61	5499	7.72	F8	59 20.276	0.08	4	68.800	-61 19 58.84	0.18	4	68.800		21531		13312
15521	+30	2738	4.91	A0	59 26.202	0.10	6	71.425	+29 59 23.15	0.10	6	71.425	3264	21534		33264
15522	-25	11281	7.9	M3	15 59 26.875	0.04	4	69.046	-26 00 35.38	0.07	4	69.046				13313
15523	-60	6348	6.97	B3p	59 28.323	0.19	5	70.618	-60 21 39.36	0.17	5	70.618	3265	21537	3598	33265
15524	-35	10677	7.8	K0	59 30.314	0.05	4	69.771	-36 02 44.71	0.05	4	69.771				13314
15525	-48	10512	4.74	G5	59 31.805	0.06	6	70.072	-49 05 31.30	0.05	6	70.072	3266	21539		33266
15526	-17	4472	8.9	A2	59 45.744	0.22	2	70.383	-18 02 01.29	0.03	2	70.383				13315
15527	-22	4072	7.7	A2	15 59 46.865	0.13	4	69.419	-23 02 35.43	0.16	4	69.419				13316
15528	- 8	4136	8.1	K5	16 00 00.118	0.09	2	70.906	- 8 21 23.46	0.23	2	70.906		21546		13317
15529	-69	2486	9.1	K0	00 03.693	0.17	4	69.411	-69 55 19.01	0.23	4	69.411				19818
15530	-38	10832	4.97	B5	00 04.140	0.14	6	69.596	-38 27 53.87	0.06	6	69.596	3267	21548		33267
15531	+23	2886	4.82	A2	00 08.372	0.13	6	71.562	+22 56 31.73	0.17	6	71.562	3268	21552		33268
15532	- 0	3049	7.6	G5	16 00 09.114	0.17	2	71.410	- 0 16 29.42	0.11	2	71.410				13318
15533	- 4	4026	8.1	F5	00 10.979	0.29	2	71.010	- 4 40 48.48	0.11	2	71.010				13319
15534	- 2	4094	8.0	K2	00 12.047	0.00	2	71.402	- 2 19 56.72	0.36	2	71.402			3600	13320
15535*	-43	10494	9.1	K0	00 15.721	0.07	4	69.829	-43 47 34.97	0.12	4	69.829				1908
15536	-72	1902	5.71	K0	00 19.153	0.09	7	69.349	-72 15 56.03	0.08	6	69.543	3269	21557	3603	33269
15536 SP					16 00 19.068	0.10	30	71.246	-72 15 56.38	0.14	29	71.257	3269	21557	3603	53269
15537	+ 2	3033	8.3	A0	00 25.120	0.04	2	71.025	+ 1 50 09.54	0.31	2	71.025				13321
15538	-52	9209	8.4	K2	00 28.519	0.09	5	69.749	-53 01 24.55	0.08	4	69.803				13322
15539	-75	1277	7.61	K2	00 40.842	0.10	5	70.275	-76 07 14.76	0.20	4	70.034		21566		19819
15539 SP					00 40.836	0.18	4	69.697	-76 07 14.97	0.45	4	69.697		21566		19819

15472 SDS, 9.7m, 2", 131°.

15535 9.4m-10.6m, 0", 3, 190°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
15540	-41	10507	8.0	A2	16	00 42.435	0.09	5	70.865	-41 34 27.16	0.16	4	70.537					1909
15541	-15	4240	8.8	K0		00 42.779	0.14	2	71.899	-16 15 54.60	-	1	71.502					13323
15542	-34	10722	9.2	G0		00 52.453	0.16	4	69.825	-35 02 23.94	0.16	4	69.825					13324
15543	-4	4032	8.6	K5		00 57.259	0.06	2	70.396	-5 08 30.44	0.07	2	70.396					13325
15544	-62	5172	8.4	K0		01 08.714	0.20	4	71.141	-62 34 23.84	0.19	4	71.141					13326
15545	-55	7018	7.17	M0	16	01 14.329	0.17	4	70.551	-56 12 14.72	0.18	4	70.551		21581			13327
15546	-58	6627	8.5	G5		01 16.443	0.10	4	71.208	-59 04 41.32	0.07	4	71.208					13328
15547	-55	7025	7.5	G5		01 18.854	0.08	4	70.414	-55 40 31.49	0.13	4	70.414					13329
15548	-46	10544	9.2	K0		01 21.009	0.18	4	70.556	-46 54 55.31	0.25	4	70.556					1910
15549	+4	3105	8.7	M0		01 22.963	0.08	2	70.394	+3 51 49.21	0.04	2	70.394					13330
15550	-28	11841	7.70	K5	16	01 24.635	0.18	4	70.272	-28 47 41.82	0.12	4	70.272		21588			13331
15551	-53	7044	7.9	M0		01 25.421	0.07	4	70.230	-54 02 36.92	0.14	4	70.230					13332
15552	-9	4291	7.41	K0		01 25.894	0.10	2	70.402	-9 46 59.79	0.15	2	70.402		21589			13333
15553	-67	3015	8.9	K0		01 26.169	0.16	4	71.245	-67 27 06.72	0.20	4	71.245					19820
15554	-47	10524	9.0	F8		01 30.571	0.10	4	70.837	-47 57 12.32	0.05	4	70.837					1911
15555	-38	10851	9.1	F8	16	01 36.255	0.24	5	70.745	-38 49 05.56	0.08	5	70.745					13334
15556	-20	4390	8.8	K2		01 39.078	0.13	4	69.903	-21 12 57.88	0.17	4	69.903					13335
15557	-11	4056	7.4	K5		01 39.502	0.10	2	71.481	-11 43 16.72	0.23	2	71.481					13336
15558	-38	10852	7.6	M1		01 39.869	0.17	4	70.559	-39 04 50.34	0.13	4	70.559					13337
15559	+3	3120	8.8	K0		01 41.840	0.15	2	71.931	+2 54 59.16	0.35	2	71.931					13338
15560	-16	4209	9.0	K5	16	01 52.244	0.04	2	72.736	-16 44 54.97	0.06	2	72.736					13339
15561	-14	4341	8.4	K2		01 52.974	0.01	2	71.556	-14 46 28.13	0.01	2	71.556					13340
15562	+1	3160	7.04	F8		01 56.570	0.10	2	71.474	+0 48 31.18	0.01	2	71.474		21597			13341
15563	-33	10910	9.1	K2		01 57.711	0.16	4	70.878	-33 16 24.17	0.08	4	70.878					13342
15564	-26	11193	7.8	G5		01 57.982	0.08	4	69.950	-26 48 44.07	0.17	4	69.950					13343
15565	-0	3052	7.8	K2	16	02 06.794	0.05	2	72.046	-1 01 27.58	0.02	2	72.046		21601			13344
15566	-35	10711	8.8	K0		02 09.691	0.05	4	70.949	-35 31 12.04	0.21	4	70.949					13345
15567	-18	4228	6.75	F5		02 09.722	0.35	2	72.725	-18 24 13.75	0.05	2	72.725		21602			13346
15568	-78	1087	8.0	K2		02 25.767	0.17	5	70.958	-78 54 08.56	0.12	4	70.888					19821
15568 SP						02 25.668	0.18	4	70.153	-78 54 09.18	0.13	4	70.153					19821
15569	-48	10543	9.0	G5	16	02 26.131	0.02	4	71.672	-48 42 34.30	0.10	4	71.672					1912
15570	-40	10185	8.5	K5		02 28.529	0.16	4	71.590	-40 35 57.24	0.16	4	71.590					1913
15571	-3	3870	6.88	A0		02 31.206	0.07	2	72.393	-3 23 33.15	0.22	2	72.393					13347
15572	-19	4307	2.90	B1		02 31.490	0.03	81	71.460	-19 40 13.03	0.03	80	71.435	597	21608	3609		30597
15573	-19	4308	5.06	B1		02 31.846	0.10	5	70.622	-19 40 00.35	0.28	5	70.622		21610			21110
15574	+3	3122	8.5	F5	16	02 38.361	0.01	2	72.888	+3 11 33.39	0.01	2	72.888					13348
15575	-32	11406	8.8	G5		02 38.476	0.17	4	71.146	-32 34 28.40	0.06	4	71.146					13349
15576	-37	10692	8.1	F5		02 49.958	0.09	4	71.224	-37 54 13.37	0.19	4	71.224					13350
15577	-19	4309	8.1	A0		02 50.257	0.27	2	72.751	-19 32 46.80	0.27	2	72.751		21613			13351
15578	-20	4402	8.9	A2		02 56.795	0.25	3	70.747	-20 20 53.03	0.41	3	70.747					13352
15579	-44	10625	4.84	A3p	16	02 56.876	0.03	55	70.583	-45 02 21.16	0.04	52	70.540	596	21615	3610		30596
15580	-59	6607	8.6	A3		02 58.959	0.03	2	69.690	-59 59 22.39	0.04	2	69.690					13353
15581	-49	10319	8.5	F8		02 59.837	0.18	4	71.402	-49 47 03.02	0.12	4	71.402					1914
15582	-10	4242	8.8	G5		03 01.264	0.01	2	73.317	-10 40 01.10	0.23	2	73.317					13354
15583	-6	4360	7.9	K0		03 03.750	0.10	2	72.807	-6 57 01.62	0.04	2	72.807					13355
15584	-23	12700	5.94	B8	16	03 07.112	0.09	6	71.859	-23 28 18.56	0.10	6	71.859		21620			21111
15585	-42	11035	8.5	K0		03 11.463	0.17	4	70.908	-43 02 13.15	0.09	4	70.908					1915
15586	-15	4243	8.6	K0		03 16.748	0.03	2	73.384	-15 20 03.92	0.03	2	73.384					13356
15587	-44	10631	9.44	F8		03 18.003	0.21	4	70.979	-44 45 04.44	0.17	4	70.979		21624			1916
15588	-36	10642	4.33	B3		03 18.070	0.06	29	71.091	-36 40 04.93	0.05	29	71.091	599	21625	3611		30599
15589	-8	4153	7.8	G5	16	03 18.461	0.01	2	70.768	-8 38 08.74	0.17	2	70.768					13357
15590	-13	4336	8.3	K2		03 19.369	0.05	2	72.848	-13 45 23.25	0.16	2	72.848					13358
15591	-5	4235	6.49	K0		03 19.862	0.37	2	72.791	-5 00 19.14	0.24	2	72.791		21626			13359
15592	-24	12534	8.5	K0		03 24.849	0.08	4	69.805	-24 48 08.69	0.10	4	69.805					13360
15593	-45	10450	7.32	K0		03 40.196	0.10	4	70.560	-45 12 45.85	0.04	4	70.560		21631			1917
15594	-36	10645	8.7	G5	16	03 41.417	0.13	4	70.541	-36 15 35.34	0.12	4	70.541					13361
15595	+2	3042	7.4	G5		03 42.636	0.08	2	72.780	+1 50 42.27	0.29	2	72.780					13362
15596	-4	4042	7.8	F8		03 43.649	0.28	2	72.503	-4 37 13.26	0.13	2	72.503					13363
15597	+0	3455	8.6	K2		03 46.784	0.22	2	71.898	-0 03 41.49	0.08	2	71.898					13364
15598	-61	5554	8.7	K0		03 46.899	0.08	4	68.918	-61 25 50.75	0.11	4	68.918					13365
15599	-41	10526	7.27	K2	16	03 46.946	0.15	4	70.585	-41 56 09.84	0.16	4	70.585		21636			1918
15600	-20	4405	4.13	B2		03 52.613	0.10	6	71.489	-20 32 07.81	0.08	6	71.489		21639			21112
15601	-23	12707	8.7	K2		03 52.627	0.12	4	70.784	-23 30 44.14	0.11	4	70.784					13366
15602	-15	4246	8.8	A2		04 02.413	0.05	2	69.860	-16 00 45.12	0.04	2	69.860					13367
15603	-69	2490	8.1	K0		04 03.697	0.07	4	69.860	-69 27 27.49	0.19	4	69.860					19822
15604	-47	10554	8.0	K5	16	04 06.789	0.12	4	70.633	-47 50 00.82	0.12	4	70.633					1919
15605	-40	10205	9.5	G5		04 12.002	0.28	4	70.917	-40 14 22.73	0.18	4	70.917					1920
15606	-16	4219	7.58	A0		04 13.119	0.11	2	71.940	-16 48 35.58	0.21	2	71.940			3614		13368
15607	-21	4276	8.5	G0		04 20.314	0.15	4	70.605	-21 55 37.12	0.13	4	70.605					13369
15608	-2	4111	8.4	A5		04 21.277	0.19	2	71.952	-3 07 10.33	0.26	2	71.952					13370
15609	-3	3875	7.5	M0	16	04 23.446	0.04	2	71.426	-3 44 40.42	0.07	2	71.426					13371
15610	-31	12577	8.6	G5		04 24.653	0.03	4	70.556	-31 25 09.03	0.24	4	70.556					13372
15611	-17	4493	7.7	K2		04 28.371	0.46	2	71.893	-18 14 02.30	0.23	2	71.893					13373
15612	-29	12299	8.5	K0		04 29.357	0.09	4	70.403	-29 20 19.32	0.06	4	70.403					13374
15613	-30	12848	7.9	K0		04 30.626	0.17	4	70.374	-30 25 48.40	0.03	4	70.374					13375

15576 SDS, 8.3m-10.3m, 0°8, 296°.

15580 SDS, 9.5m, 7°2, 343°.

CATALOG OF 23,001 STARS FOR 1950.0

451

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15614	-52 9264	8.3	K0	16 04 40.089	0.14	4	69.898	-53 00 45.20	0.07	4	69.898				13376
15615	-72 1907	8.7	K0	04 41.633	0.09	4	69.841	-72 26 35.75	0.11	4	69.841				19823
15616	-1 3131	8.8	K2	04 41.745	0.13	2	72.255	-1 29 33.56	0.53	2	72.255				13377
15617	-24 12552	6.22	B8	04 51.482	0.13	7	71.160	-24 19 46.92	0.10	7	71.160		21668		21113
15618	-48 10564	8.5	G5	04 59.448	0.18	4	69.901	-48 26 46.24	0.10	4	69.901				1921
15619	+3 3128	8.7	K0	16 04 59.563	0.04	2	71.398	+3 32 30.16	0.11	2	71.398				13378
15620	-27 10796	7.30	K5	05 02.621	0.08	4	69.482	-27 35 53.36	0.06	4	69.482		21672	3615	13379
15621	-58 6650	9.0	K2	05 10.621	0.15	5	70.748	-58 22 21.65	0.28	5	70.748				13380
15622	-57 7613	5.79	A0	05 11.024	0.14	6	69.223	-57 48 08.23	0.03	6	69.223	3273	21677	3616	33273
15623	+10 2958	5.63	A5	05 14.102	0.08	6	70.131	+10 01 26.95	0.12	6	70.131	3274	21682		33274
15624	-65 3233	8.8	K0	16 05 25.808	0.15	4	70.068	-65 23 48.01	0.06	4	70.068				19824
15625	-63 3820	8.5	K0	05 28.247	0.13	4	69.349	-63 20 43.12	0.19	4	69.349				13381
15626	-44 10661	9.44	K0	05 38.487	0.09	4	69.900	-44 36 06.88	0.08	4	69.900		21689		1922
15627	-23 12731	5.79	B9	05 44.212	0.06	6	68.912	-23 33 13.09	0.09	6	68.912	3275	21694	3618	33275
15628	+17 2964	5.34	G5	05 48.939	0.05	28	71.411	+17 10 43.67	0.07	28	71.411	1421	21696	3619	31421
15629	-39 10334	9.1	F8	16 05 54.932	0.12	6	70.823	-39 30 54.67	0.08	6	70.823				13382
15630	-57 7629	7.8	K5	05 58.362	0.19	4	69.693	-57 37 44.29	0.21	4	69.693				13383
15631	+0 3461	8.9	F8	05 58.477	0.12	2	72.336	+0 43 21.52	0.81	2	72.336				13384
15632	-35 10761	8.7	G5	06 01.467	0.17	4	70.349	-35 22 00.35	0.29	4	70.349				13385
15633	-43 10559	8.0	K0	06 02.734	0.27	5	70.621	-43 31 23.42	0.15	5	70.621				1923
15634	-35 10763	8.8	K2	16 06 05.775	0.12	4	70.310	-35 36 19.86	0.25	4	70.310				13386
15635	-49 10352	8.5	K5	06 06.927	0.08	3	70.259	-49 29 00.10	0.16	3	70.259				1924
15636	+2 3053	8.3	K5	06 16.633	0.03	2	72.099	+1 58 39.72	0.36	2	72.099				13387
15637	-9 4307	7.4	A5	06 18.449	0.07	2	71.940	-9 31 00.18	0.04	2	71.940				13388
15638	-7 4205	7.61	K0	06 19.222	0.19	2	71.963	-8 05 15.58	0.20	2	71.963		21712		13389
15639	-5 4246	8.7	A0	16 06 26.125	0.28	2	72.064	-5 34 21.21	0.14	2	72.064				13390
15640	-19 4322	8.4	A0	06 26.357	0.18	2	70.392	-19 19 34.24	0.02	2	70.392		21716		13391
15641	-33 10958	8.6	K5	06 29.627	0.16	4	70.805	-33 21 30.68	0.15	4	70.805				13392
15642	-16 4230	8.8	G0	06 38.191	0.11	3	72.730	-17 03 24.03	0.14	3	72.730				13393
15643	-33 10961	5.58	B8	06 39.799	0.08	6	69.573	-33 24 53.85	0.07	6	69.573	3277	21722	3622	33277
15644	-53 7214	7.5	K5	16 06 41.966	0.12	5	69.412	-53 44 20.92	0.11	4	69.375				13394
15645	+6 3169	6.02	G5	06 43.622	0.02	143	71.461	+6 30 55.30	0.03	137	71.433	1422	21724	3623	81422
15646	-30 12889	8.9	K2	06 44.530	0.16	4	69.826	-31 06 36.66	0.09	4	69.826				13395
15647	-6 4370	8.3	K0	06 51.424	0.02	2	72.459	-6 35 50.03	0.03	2	72.459				13396
15648	-10 4258	8.2	G0	07 05.481	0.24	3	72.968	-11 00 06.98	0.04	3	72.968				13397
15649	-12 4441	7.5	K0	16 07 06.142	0.00	2	72.473	-12 45 20.70	0.22	2	72.473				13398
15650	+1 3168	6.75	K2	07 08.565	0.18	2	72.392	+0 57 00.48	0.56	2	72.392		21734		13399
15651	-26 11240	6.66	B9	07 12.262	0.13	7	71.760	-26 46 44.23	0.13	5	71.532		21737		21114
15652	-30 12902	8.7	F2	07 15.625	0.11	5	70.252	-30 24 02.66	0.16	5	70.252				13400
15653	-21 4287	6.92	A0	07 22.139	0.12	4	69.928	-22 01 37.21	0.20	4	69.928		21740		13401
15654	-1 3137	7.9	F2	16 07 23.455	0.07	2	72.472	-1 29 07.18	0.02	2	72.472				13402
15655	-32 11472	9.2	F5	07 24.239	0.23	4	70.604	-32 37 55.48	0.09	4	70.604				13403
15656	-22 4106	7.7	A2	07 26.462	0.14	4	70.678	-22 58 35.68	0.13	4	70.678				13404
15657	+1 3170	6.57	K0	07 40.212	0.13	2	71.492	+1 43 52.42	0.00	2	71.492		21744		13405
15658	-36 10685	9.0	K0	07 41.848	0.17	4	69.870	-36 23 33.26	0.13	4	69.870				13406
15659	-46 10593	9.4	K0	16 07 44.535	0.13	4	70.345	-46 44 36.25	0.17	4	70.345				1925
15660	-40 10251	6.16	F0	07 52.556	0.10	6	69.704	-40 59 23.04	0.12	6	69.704	3278	21748	3627	33278
15661	-37 10726	9.0	F5	07 56.013	0.15	4	69.902	-37 19 54.85	0.08	4	69.902				13407
15662	-24 12591	7.8	K0	08 00.377	0.17	5	71.360	-24 59 19.74	0.15	5	71.360				13408
15663	-20 4423	8.5	K5	08 01.841	0.18	4	70.283	-20 16 11.54	0.05	4	70.283				13409
15664	-55 7197	8.3	G5	16 08 02.378	0.06	4	68.936	-55 42 16.15	0.05	4	68.936				13410
15665	+2 3058	8.1	K0	08 06.539	0.00	2	71.406	+2 45 00.74	0.09	2	71.406				13411
15666	-13 4361	8.1	K0	08 15.209	0.28	2	71.444	-13 51 46.97	0.67	2	71.444				13412
15667	-80 803	7.0	K0	08 19.431	0.13	5	70.729	-80 40 28.06	0.15	5	70.729				19825
15667 SP				08 19.732	0.27	4	70.407	-80 40 27.64	0.28	4	70.407				19825
15668	-26 11244	8.6	K0	16 08 21.508	0.15	4	70.311	-26 20 30.18	0.20	4	70.311				13413
15669	-71 1961	8.4	F8	08 22.286	0.12	4	69.772	-72 11 59.26	0.27	4	69.772				19826
15670	-64 3411	8.4	K0	08 24.035	0.13	4	68.892	-64 25 12.34	0.08	4	68.892				19827
15671	-26 11247	6.77	B8	08 29.465	0.07	6	71.204	-27 01 19.61	0.22	6	71.204		21757		21115
15672	-11 4087	8.9	A0	08 35.616	0.20	2	70.388	-11 38 22.19	0.16	2	70.388				13414
15673	-3 3888	8.4	K5	16 08 36.361	0.05	2	70.396	-3 51 37.59	0.19	2	70.396			3630	13415
15674	-42 11100	8.0	F0	08 48.978	0.19	4	69.926	-42 14 48.68	0.15	4	69.926				1926
15675	-25 11424	7.70	G5	08 49.070	0.14	4	69.800	-25 45 17.72	0.10	4	69.800		21764		13416
15676	-68 2632	8.9	K0	08 54.532	0.08	4	70.089	-68 24 59.39	0.21	4	70.089				19828
15677	-66 2911	8.08	K0	09 01.592	0.13	4	70.200	-66 56 53.93	0.18	4	70.200		21769		19829
15678	-0 3069	8.7	K5	16 09 03.052	0.22	2	69.952	-0 42 20.32	0.06	2	69.952				13417
15679*	-19 4332	6.49	A	09 03.894	0.12	6	70.716	-19 19 19.15	0.17	6	70.716		21771		21116
15680*	-19 4333	4.29	B3	09 05.083	0.06	7	71.188	-19 19 56.95	0.10	6	71.177		21773		21117
15681	-18 4243	7.7	B9	09 11.785	0.13	6	71.638	-18 56 03.46	0.15	6	71.638				21118
15682	+17 2982	5.90	A0	09 12.757	0.11	6	69.782	+16 47 37.61	0.14	6	69.782	3279	21777		33279
15683	-27 10841	4.70	B3	16 09 13.057	0.13	8	71.217	-27 47 54.41	0.19	7	71.214		21778		21119
15684	-50 10226	8.7	G5	09 13.603	0.05	4	70.345	-50 55 42.17	0.18	4	70.345				1927
15685	-9 4324	4.91	A2	09 15.774	0.05	6	69.405	-9 56 10.46	0.06	6	69.405	3280	21780		33280
15686	-19 4334	8.3	B9	09 27.007	0.07	6	71.572	-19 27 04.71	0.12	5	71.368				21120
15687	-58 6693	8.7	K0	09 28.640	0.06	4	70.890	-59 01 27.73	0.09	4	70.890				13418

15679 A 9951CD, 6.9m-7.9m, 2.7, 51°.

15680 A 9951A, 4.4m-6.9m, 0.9, 3°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15688	-51	9884	8.7	K2	16 09 30.621	0.17	4	70.167	-51 26 57.25	0.12	4	70.167				1928
15689	-54	7245	5.09	K0	09 31.366	0.03	109	71.181	-54 30 11.97	0.03	109	71.163	600	21787	3632	30600
15690	-43	10616	7.62	F0	09 43.476	0.18	3	70.558	-43 56 47.80	0.18	2	69.689		21791		1929
15691	-10	4268	8.6	K5	09 43.532	0.06	2	71.878	-10 21 17.57	0.06	2	71.878				13419
15692	-27	10851	8.01	F2	09 45.128	0.12	4	69.326	-28 00 17.90	0.10	4	69.326		21793		13420
15693	-19	4337	7.50	B9	16 09 49.343	0.27	2	71.474	-19 22 31.80	0.23	2	71.474		21795		13421
15694	-58	6696	8.5	G5	09 49.438	0.09	4	70.477	-58 44 34.38	0.23	4	70.477				13422
15695	-33	11001	7.54	M0	09 58.048	0.26	4	70.677	-34 10 48.13	0.16	4	70.677		21799		13423
15696	-15	4266	8.9	G5	09 59.679	0.20	2	72.385	-15 53 24.88	0.30	2	72.385				13424
15697	-22	4119	8.5	A2	10 13.273	0.16	4	69.900	-22 21 29.39	0.07	4	69.900				13425
15698	-14	4370	8.0	K5	16 10 21.352	0.16	2	72.420	-14 59 24.54	0.01	2	72.420				13426
15699	-45	10525	8.19	K5	10 32.529	0.16	3	70.745	-45 44 54.80	0.14	3	70.745		21807		1930
15700	+13	3089	6.96	A3	10 37.569	0.12	6	71.139	+12 55 37.15	0.17	6	71.139	3282	21808		33282
15701	-79	894	9.1	K2	10 38.514	0.16	4	70.329	-79 25 06.60	0.13	4	70.329				19830
15701	SP				10 38.500	0.14	4	69.857	-79 25 06.92	0.22	4	69.857				19830
15702	-29	12380	7.78	F8	16 10 42.627	0.12	4	69.373	-30 05 08.73	0.10	4	69.373		21812		13427
15703*	-24	12623	6.34	B8	10 44.766	0.11	6	70.875	-24 17 45.06	0.07	6	70.875		21814		21121
15704	+5	3165	5.64	K0	10 46.866	0.03	5	70.382	+5 08 51.12	0.16	5	70.382	3283	21815		33283
15705	-3	3896	6.84	A5	10 47.767	0.15	2	71.941	-3 55 30.78	0.22	2	71.941		21816		13428
15706	-35	10830	9.1	K0	10 49.074	0.09	4	71.191	-35 38 18.19	0.29	4	71.191				13429
15707	-63	3854	4.03	G0	16 10 52.091	0.04	62	71.077	-63 33 37.28	0.04	61	71.052	602	21819	3633	30602
15708	-48	10631	8.5	K0	10 54.348	0.10	4	70.922	-48 11 55.55	0.16	4	70.922				1931
15709	+21	2886	6.58	A2	10 57.866	0.16	6	71.795	+21 41 32.40	0.17	6	71.795	3284	21820		33284
15710	-8	4188	7.7	K2	11 00.441	0.08	2	70.439	-9 04 36.49	0.08	2	70.439				13430
15711	-23	12790	8.1	G5	11 02.036	0.14	4	69.509	-23 38 53.45	0.18	4	69.509				13431
15712	-52	9399	8.3	K0	16 11 02.190	0.14	4	70.241	-52 11 46.00	0.07	4	70.241				13432
15713	-5	4259	8.5	A0	11 03.769	0.23	2	72.005	-6 06 12.13	0.24	2	72.005				13433
15714	-7	4234	8.8	A0	11 04.613	0.12	3	73.332	-7 31 10.80	0.03	3	73.332				13434
15715	-17	4518	9.0	K2	11 12.487	0.15	2	71.350	-18 04 16.81	0.18	2	71.350				13435
15716p	-38	10926	9.1	G0	11 21.666	0.06	4	71.165	-38 31 11.25	0.07	4	71.165				13436
15717	-16	4252	8.7	K2	16 11 24.837	0.01	2	72.523	-16 24 54.81	0.26	2	72.523				13437
15718	-49	10441	8.0	K5	11 26.844	0.20	4	70.317	-49 44 58.03	0.19	4	70.317				1932
15719	-13	4385	8.6	K2	11 27.136	0.10	2	72.802	-14 02 06.88	0.29	2	72.802				13438
15720	-31	12692	9.2	F5	11 27.353	0.07	5	70.595	-31 48 52.55	0.17	4	70.434				13439
15721*	-56	7473	7.9	G5	11 30.429	0.08	4	69.473	-56 33 46.71	0.20	4	69.473				13440
15722	-20	4444	6.31	A0	16 11 32.186	0.20	4	69.460	-20 58 55.31	0.20	4	69.460		21834		13441
15723	+1	3181	8.8	K2	11 34.189	0.02	2	72.806	+1 39 07.01	0.15	2	72.806				13442
15724	+4	3140	8.1	G5	11 35.547	0.13	2	72.810	+4 09 10.71	0.12	2	72.810				13443
15725	-50	10281	8.5	K0	11 36.476	0.09	5	70.715	-50 53 31.57	0.23	5	70.715				1933
15726	-3	3902	8.5	G5	11 38.746	0.03	3	72.599	-3 20 51.41	0.12	2	72.809				13444
15727	-84	519	8.5	G5	16 11 38.995	0.17	4	70.517	-84 20 06.18	0.34	4	70.517				19831
15727	SP				11 38.931	0.25	4	70.580	-84 20 06.51	0.10	4	70.580				19831
15728	-3	3903	3.03	M0	11 43.262	0.04	32	71.513	-3 34 04.50	0.05	31	71.452	603	21838	3639	30603
15729	-32	11537	8.0	K5	11 45.396	0.18	4	69.830	-32 19 14.64	0.20	4	69.830				13445
15730	-18	4249	6.37	K0	11 45.716	0.33	2	70.401	-18 24 34.11	0.15	2	70.401		21840		13446
15731	+3	3151	7.08	F5	16 11 51.184	0.13	2	70.502	+2 46 22.54	0.13	2	70.502		21844		13447
15732	-25	11453	6.16	B9	11 51.296	0.08	6	71.468	-25 21 06.96	0.05	6	71.468		21845		21122
15733	-22	4127	7.10	B9	11 55.064	0.10	6	71.593	-22 15 18.96	0.07	6	71.593		21847		21123
15734	-63	3863	8.1	G5	12 01.797	0.11	4	69.748	-64 02 25.19	0.12	4	69.748				19832
15735	-41	10583	9.0	F2	12 10.365	0.17	4	69.753	-41 31 30.33	0.12	4	69.753				1934
15736	-26	11273	7.48	G0	16 12 14.811	0.30	4	70.200	-27 05 04.49	0.16	4	70.200		21853		13448
15737	+0	3477	8.5	K2	12 21.528	0.24	2	71.432	-0 08 08.28	-	1	70.567				13449
15738	-12	4462	8.7	K0	12 25.242	0.09	2	71.918	-12 37 29.68	0.10	2	71.918				13450
15739	-6	4391	8.0	F0	12 29.389	0.07	2	71.960	-7 14 12.83	0.03	2	71.960				13451
15740	-60	6485	8.5	K2	12 32.072	0.08	4	70.616	-60 45 53.39	0.03	4	70.616				13452
15741	-72	1920	6.92	A0	16 12 33.773	0.08	7	70.383	-72 55 14.34	0.30	6	70.238	3285	21856		33285
15741	SP				12 33.744	0.23	10	71.582	-72 55 14.34	0.25	10	71.582	3285	21856		53285
15742	-53	7585	7.5	K2	12 35.018	0.07	4	70.124	-54 03 16.77	0.10	4	70.124				13453
15743	-1	3159	8.6	G5	12 38.785	0.37	2	71.929	-2 12 38.35	0.19	2	71.929				13454
15744	-10	4280	7.6	G0	12 39.729	0.06	2	71.990	-10 55 21.19	0.08	2	71.990				13455
15745	-28	12008	8.3	G5	16 12 40.784	0.20	5	71.207	-28 53 12.22	0.13	5	71.207				13456
15746	-0	3085	8.1	K0	12 41.296	0.27	2	72.420	-0 30 50.48	0.03	2	72.420				13457
15747	-12	4463	7.8	A0	12 46.100	0.04	2	72.011	-12 33 21.47	0.04	2	72.011				13458
15748	-78	1092	4.78	M3	12 47.879	0.02	171	70.984	-78 34 26.37	0.03	168	70.961	1424	21862	3642	61424
15748	SP				12 47.893	0.02	203	71.068	-78 34 26.52	0.04	198	71.050	1424	21862	3642	71424
15749	-14	4383	6.10	A0	16 13 01.889	0.10	6	70.882	-14 43 31.36	0.16	6	70.882	3286	21867		33286
15750	-15	4284	8.6	K0	13 02.969	0.09	2	72.237	-15 45 49.39	0.14	2	72.237				13459
15751	-4	4079	9.0	K2	13 05.390	0.21	2	72.905	-4 46 23.91	0.31	2	72.905				13460
15752	-38	10932	9.2	F5	13 06.665	0.07	3	69.673	-38 36 47.19	0.08	3	69.673				13461
15753	-36	10714	9.1	G5	13 09.562	0.25	4	70.575	-36 37 29.24	0.10	4	70.575				13462
15754	-56	7509	8.3	K2	16 13 14.775	0.04	4	70.416	-57 10 57.83	0.22	4	70.416				13463
15755	-27	10877	8.8	A0	13 16.164	0.10	4	70.747	-28 02 25.92	0.16	4	70.747				13464
15756	-24	12644	8.4	A0	13 21.239	0.07	4	71.061	-24 56 22.25	0.07	4	71.061				13465
15757	+3	3157	8.9	K5	13 21.324	0.11	2	71.959	+3 11 30.18	0.00	2	71.959				13466
15758	-24	12645	8.5	B9	13 23.561	0.05	7	71.834	-24 51 54.96	0.14	6	71.933				21124

15703 A 9967, 6.4m-10.4m, 1°4, 229°.
15716 SDS, 10.2m, 2°2, 36°.

15721 SDS, 8.2m-10.0m, 1°6, 50°.

CATALOG OF 23,001 STARS FOR 1950.0

453

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decd 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
15759	-61	5623	8.7	K0	16 13 25.377	0.13	4	70.855	-61 49 48.34	0.16	4	70.855				13467
15760	-23	12816	6.62	B8	13 25.974	0.19	4	71.086	-24 09 31.50	0.20	4	71.086		21873		21125
15761	-42	11154	9.2	K2	13 28.084	0.21	4	70.584	-42 54 35.66	0.15	4	70.584				1935
15762	-30	12997	8.8	K0	13 35.569	0.16	4	71.342	-30 45 36.08	0.09	4	71.342				13468
15763	-29	12411	7.61	B8	13 44.556	0.10	3	71.156	-29 37 14.72	0.27	3	71.156		21878		21126
15764	-25	11464	8.3	A0	16 13 47.885	0.07	4	70.644	-25 44 24.06	0.18	3	70.365				13469
15765	-33	11051	9.3	F8	13 49.404	0.18	4	71.297	-33 27 50.86	0.19	4	71.297				13470
15766	-54	7388	7.7	M0	13 52.251	0.09	5	71.329	-55 05 20.40	0.24	5	71.329				13471
15767	-66	2923	8.3	K0	13 52.981	0.16	4	71.202	-66 59 24.79	0.12	4	71.202				19833
15768	-22	4133	8.6	F0	13 54.081	0.06	4	71.462	-22 59 15.32	0.16	4	71.462				13472
15769	-65	3268	8.9	K5	16 13 59.685	0.14	4	71.406	-65 28 36.29	0.21	4	71.406				19834
15770	-20	4454	6.42	B9	14 01.687	0.08	3	71.232	-21 10 52.99	0.20	3	71.232		21883		21127
15771	-8	4197	8.6	K5	14 03.370	0.07	2	70.773	-8 18 25.66	0.19	2	70.773				13473
15772	-19	4350	6.60	K0	14 03.537	0.12	4	70.700	-19 58 53.41	0.20	4	70.700		21885		13474
15773	-39	10383	9.2	K0	14 06.798	0.11	3	70.784	-39 41 38.25	0.20	3	70.784				13475
15774	+23	2916	6.59	K0	16 14 08.634	0.04	40	71.547	+23 14 44.58	0.05	39	71.520	1425	21887	3648	81425
15775	-5	4266	7.20	A2	14 08.791	0.23	2	72.266	-5 22 26.79	0.01	2	72.266		21888		13476
15776	-73	1713	7.43	K0	14 09.776	0.18	5	71.505	-74 11 06.66	0.15	5	71.505		21890		19835
15777	-37	10757	7.8	F2	14 25.234	0.10	4	70.808	-37 37 53.08	0.11	3	70.312				13477
15778	-43	10666	9.0	G0	14 33.754	0.10	4	71.286	-43 45 09.61	0.12	4	71.286				1936
15779	-73	1714	9.1	K2	16 14 38.629	0.23	4	70.854	-73 13 39.52	0.10	4	70.854				19836
15780	-46	10627	8.0	M1	14 40.608	0.05	5	71.482	-46 19 41.87	0.24	5	71.482				1937
15781	+4	3152	8.9	K2	14 41.561	0.21	2	71.365	+4 35 08.16	0.12	2	71.365				13478
15782	-40	10307	9.0	F5	14 43.719	0.18	5	71.787	-40 51 48.02	0.06	5	71.787				1938
15783	+29	2803	5.73	A0	14 44.496	0.06	6	70.776	+29 16 21.73	0.12	6	70.776	3287	21900		33287
15784	-51	9987	9.0	K0	16 14 44.973	0.13	4	70.613	-51 25 49.85	0.09	4	70.613				1939
15785	-34	10918	8.8	K0	14 47.152	0.26	4	71.147	-34 30 11.18	0.08	4	71.147				13479
15786	-21	4328	8.6	K0	14 49.227	0.16	4	70.633	-21 46 43.10	0.29	4	70.633				13480
15787	-53	7693	8.5	K0	14 57.219	0.13	4	70.729	-53 34 29.48	0.21	4	70.729				13481
15788	-13	4394	7.37	K0	15 02.037	--	1	72.184	-13 15 02.79	--	1	72.184		21904		13482
15789	-57	7842	7.6	M0	16 15 06.787	0.12	4	71.416	-57 58 14.42	0.09	4	71.416				13483
15790	+1	3194	6.59	K0	15 11.253	--	1	72.519	+1 37 05.34	--	1	72.519		21909		13484
15791	-28	12037	4.87	A0	15 11.445	0.14	6	70.800	-28 29 31.20	0.12	6	70.800	3288	21910	3651	33288
15792	-85	450	8.0	K5	15 20.416	0.15	4	70.454	-85 23 46.02	0.16	4	70.454				19837
15792	SP				15 20.274	0.41	4	70.826	-85 23 46.51	0.29	4	70.826				19837
15793	-35	10872	8.7	F2	16 15 22.584	0.10	3	70.942	-35 17 14.57	0.11	3	70.942				13486
15794	-52	9535	8.3	K0	15 25.367	0.11	4	71.383	-52 35 03.31	0.17	4	71.383				13487
15795	-63	3884	7.7	K2	15 27.903	0.11	4	70.943	-63 49 13.01	0.21	4	70.943				13488
15796	-22	4148	7.5	A0	15 28.706	0.15	4	69.890	-23 09 10.99	0.07	3	69.719				13489
15797	-47	10646	9.2	K0	15 29.818	0.21	5	71.180	-47 54 15.50	0.16	5	71.180				1940
15798	-58	6742	8.6	G5	16 15 30.809	0.15	4	70.690	-58 57 00.40	0.10	4	70.690				13490
15799	-17	4534	8.0	F2	15 34.528	0.03	2	72.484	-17 15 58.87	0.58	2	72.484				13491
15800	-1	3166	9.0	A3	15 34.556	--	1	73.444	-2 08 57.97	--	1	73.444		21919		13492
15801	-76	1153	9.1	K0	15 38.272	0.14	5	70.910	-76 21 26.53	0.31	5	70.910				19838
15801	SP				15 38.159	0.46	4	69.657	-76 21 27.14	0.38	4	69.657				19838
15802	-4	4086	3.34	K0	16 15 40.475	0.03	44	71.398	-4 34 18.81	0.05	44	71.398	605	21920	3652	80605
15803	-59	6694	9.0	G0	15 43.377	0.16	4	71.231	-59 34 25.61	0.01	4	71.231				13493
15804	-68	2666	9.0	G5	15 46.007	0.09	4	71.176	-68 12 18.43	0.15	4	71.176				19839
15805	-70	2197	8.6	F5	15 54.401	0.14	4	70.612	-70 57 21.10	0.05	4	70.612				19840
15806	-10	4291	8.7	K2	15 57.750	0.01	2	73.403	-11 10 08.15	0.27	2	73.403				13494
15807	-75	1294	8.15	G5	16 15 58.965	0.12	5	70.674	-75 33 38.35	0.14	4	70.531		21928		19841
15807	SP				15 58.894	0.23	4	69.856	-75 33 37.69	0.39	3	69.531		21928		19841
15808	-11	4108	8.7	K0	15 59.224	--	1	72.277	-11 23 12.00	--	1	72.277				13495
15809	-27	10902	7.71	G0	16 02.176	0.06	5	71.343	-28 10 17.35	0.05	5	71.343		21931		13496
15810	-49	10536	4.14	K0	16 04.995	0.05	31	71.135	-50 02 06.59	0.06	31	71.135	604	21933	3656	30604
15811	-69	2521	8.60	F8	16 16 13.560	0.16	4	69.850	-69 36 12.11	0.09	4	69.850		21936		19842
15812	+26	2817	6.63	G5	16 19.199	0.18	7	71.937	+26 01 01.63	0.15	6	72.051	3290	21937		33290
15813	-25	11473	8.42	G5	16 19.930	0.07	4	70.905	-25 38 25.53	0.06	4	70.905		21939		13498
15814	-62	5286	9.0	G0	16 20.125	0.07	4	70.183	-62 31 57.36	0.18	4	70.183				13499
15815	-67	3079	7.9	K0	16 21.777	0.09	4	69.840	-67 16 11.18	0.09	4	69.840				19843
15816	-30	13041	5.69	F2	16 16 22.758	0.06	22	71.500	-30 47 13.21	0.05	20	71.479	1426	21941	3657	31426
15817	-6	4400	6.93	G5	16 28.431	0.00	2	71.350	-6 45 19.95	0.02	2	71.350		21944		13500
15818	-39	10405	8.3	K2	16 32.918	0.07	5	71.218	-39 24 00.05	0.14	5	71.218				13501
15819	-46	10650	8.0	K2	16 33.206	0.15	4	71.399	-47 07 47.00	0.17	3	71.100				1941
15820	-15	4300	8.6	A0	16 34.579	0.19	2	73.394	-15 25 34.32	0.51	2	73.394				13502
15821	-82	682	6.95	K0	16 16 45.117	0.09	6	70.224	-82 26 38.86	0.09	6	70.224	3988	21951		33988
15821	SP				16 45.188	0.15	6	70.204	-82 26 38.81	0.13	6	70.204	3988	21951		53988
15822	-43	10700	9.2	G5	16 50.523	0.14	5	71.414	-43 36 35.16	0.14	5	71.414				1942
15823	-38	10956	8.9	K0	16 51.007	0.13	4	70.358	-38 47 17.21	0.13	4	70.358				13503
15824	-41	10615	9.0	F8	16 53.096	0.17	4	71.021	-41 32 54.60	0.18	4	71.021				1943
15825	-45	10584	9.02	G0	16 16 56.756	0.06	4	70.750	-45 41 25.08	0.08	4	70.750		21955		1944
15826	-20	4464	8.6	A5	16 58.756	0.05	4	70.694	-20 39 46.61	0.10	4	70.694				13504
15827	-14	4401	8.8	M2	17 02.525	0.12	2	70.454	-14 31 26.19	0.38	2	70.454				13505
15828	-24	12667	8.0	G5	17 03.648	0.07	4	70.937	-24 14 47.60	0.06	4	70.937				13506
15829	-19	4358	8.8	B9	17 08.237	0.13	2	72.354	-19 55 31.79	0.27	2	72.354		21958		13507

15800 A 9992, 9.2m, 10°8, 174°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*	
15830	-19°	4359	7.24	B9	16 17 09.753	0.05	6	71.314	-19 56' 13.52	0.22	4	70.771		21960		21128	
15831	+ 3	3166	8.7	F5	17 13.767	0.16	2	71.323	+ 3 01 14.81	0.08	2	71.323				13508	
15832	- 9	4355	8.3	K0	17 16.185	0.00	2	72.086	- 9 43 53.88	0.15	2	72.086				13509	
15833	-30	13052	9.2	K5	17 17.650	0.20	4	71.203	-30 50 31.35	0.13	4	71.203				13510	
15834	-46	10657	9.1	K2	17 17.861	0.15	3	69.831	-46 53 21.96	0.18	3	69.831				1945	
15835	+ 1	3205	8.8	K5	16 17 18.347	0.16	2	72.792	+ 1 36 56.20	0.08	2	72.792				13511	
15836	- 2	4160	8.3	K0	17 21.922	0.12	2	71.514	- 2 54 21.34	0.09	2	71.514				13512	
15837	-71	1989	7.7	K2	17 23.548	0.15	4	69.316	-71 48 01.90	0.21	4	69.316				19845	
15838	-32	11634	9.2	G0	17 25.104	0.12	4	70.842	-32 59 22.48	0.06	4	70.842				13513	
15839	-18	4266	7.9	K2	17 35.236	0.03	2	71.947	-18 34 17.53	0.21	2	71.947				13514	
15840	- 4	4095	8.3	K2	16 17 37.354	0.03	2	72.002	- 4 26 20.22	0.03	2	72.002				13515	
15841	-23	12849	4.76	A3	17 37.364	0.10	7	72.183	-24 03 01.80	0.14	6	71.977		21969		21129	
15842	-12	4480	6.55	F0	17 40.731	0.20	2	70.462	-12 47 33.23	0.04	2	70.462		21970		13516	
15843	-16	4273	8.8	K2	17 42.176	0.24	2	72.301	-16 57 47.29	0.10	2	72.301				13517	
15844	-48	10735	8.0	M0	17 44.165	0.01	4	70.813	-48 25 17.10	0.27	4	70.813				1946	
15845	-21	4341	7.11	K5	16 17 45.333	0.15	4	70.715	-21 43 20.00	0.33	4	70.715		21971	3661	13518	
15846	-12	4481	8.7	A3	17 59.012	0.04	2	72.709	-12 34 46.16	0.16	2	72.709				13519	
15847	-63	3903	8.8	K0	18 02.957	0.07	4	68.895	-63 20 40.21	0.11	4	68.895				13520	
15848	-81	767	7.35	K2	18 04.667	0.11	4	70.348	-81 50 47.65	0.11	4	70.348		21980		19846	
15848	SP				18 04.684	0.24	4	70.390	-81 50 47.65	0.31	4	70.390		21980		19846	
15849	-29	12468	8.4	A5	16 18 07.068	0.14	4	70.669	-29 58 59.52	0.10	4	70.669				13521	
15850	-25	11485	3.1v	B1	18 08.641	0.03	64	71.253	-25 28 28.61	0.03	64	71.253	607	21982	3663	30607	
15851	-49	10578	8.0	K5	18 12.524	0.22	4	70.087	-49 32 41.43	0.13	4	70.087				1947	
15852	-74	1540	8.2	K0	18 14.140	0.17	4	69.356	-74 45 05.75	0.17	4	69.356				19847	
15853	-23	12852	7.01	B9	18 18.932	0.07	6	71.361	-23 35 23.58	0.06	6	71.361		21992		21130	
15854	- 6	4409	8.7	K0	16 18 20.365	0.51	2	72.073	- 6 28 44.98	0.35	2	72.073				13522	
15855	-56	7620	8.0	K5	18 20.371	0.14	4	68.893	-56 18 22.04	0.14	4	68.893				13523	
15856	-44	10802	8.69	F8	18 21.035	0.20	5	70.9	-44 41 52.67	0.20	4	70.595		21994		1948	
15857	-54	7566	7.9	K2	18 29.213	0.18	4	69.022	-54 31 01.61	0.24	4	69.022				13524	
15858	+ 0	3503	8.0	K2	18 32.395	0.13	2	72.054	+ 0 44 44.22	0.19	2	72.054				13525	
15859	-49	10591	5.49	B5	16 18 43.209	0.10	6	70.952	-49 27 18.61	0.09	6	70.952		21997		21131	
15860	-72	1937	7.8	K0	18 58.789	0.17	4	69.389	-72 28 12.45	0.16	4	69.389				19848	
15861	+ 0	3505	7.8	K0	19 01.264	0.02	2	71.927	+ 0 11 39.65	0.01	2	71.927				13526	
15862	-30	13078	8.1	G5	19 11.167	0.13	4	69.881	-31 08 03.41	0.01	4	69.881				13527	
15863	-34	10961	8.8	K5	19 11.215	0.14	4	70.239	-34 13 40.28	0.26	4	70.239				13528	
15864	-32	11668	8.9	K0	16 19 18.081	0.14	4	69.911	-32 11 38.45	0.09	4	69.911				13529	
15865	-51	10099	9.18	G5	19 31.308	0.16	4	68.887	-51 23 16.38	0.18	4	68.887		22006		1949	
15866	+ 1	3215	4.80	F0	19 32.008	0.03	63	71.987	+ 1 08 43.41	0.04	62	71.982	1427	22007	3666	31427	
15867	- 8	4216	7.14	A2	19 34.385	0.34	2	71.496	- 8 37 29.70	0.32	2	71.496		22008	3667	13530	
15868	- 5	4282	8.3	K0	19 37.347	0.04	2	71.979	- 5 33 42.47	0.15	2	71.979				13531	
15869	+19	3086	3.79	F0	16 19 42.667	0.10	6	70.365	+19 16 09.90	0.13	5	69.920		609	22012	3668	30609
15870	+ 3	3173	7.36	K2	19 44.356	0.03	2	71.922	+ 2 59 31.53	0.08	2	71.922		22013		13532	
15871	-35	10914	9.0	K2	19 55.149	0.14	4	69.921	-35 18 39.79	0.09	4	69.921				13533	
15872	+ 4	3164	8.7	M0	19 59.455	0.05	2	72.070	+ 3 53 21.66	0.10	2	72.070				13534	
15873	-16	4280	6.67	F0	20 01.226	0.03	2	71.972	-16 54 10.87	0.11	2	71.972		22018		13535	
15874	-54	7620	8.9	K0	16 20 10.568	0.09	4	69.353	-54 40 32.44	0.14	4	69.353				13536	
15875	-40	10341	7.52	K0	20 13.256	0.20	4	69.909	-40 57 30.42	0.05	4	69.909		22021		1950	
15876	- 6	4419	7.5	M1	20 18.077	0.08	2	72.024	- 7 05 35.26	0.14	2	72.024				13537	
15877	-64	3477	8.2	G5	20 25.475	0.09	4	69.338	-64 55 08.47	0.20	4	69.338				19849	
15878	-36	10753	8.35	F0	20 28.639	0.08	4	70.285	-36 20 10.73	0.23	4	70.285		22027		13538	
15879	- 0	3105	7.28	A5	16 20 31.304	0.30	2	72.042	- 0 44 25.99	0.10	2	72.042		22028	3670	13539	
15880	-14	4411	8.9	G0	20 31.907	0.03	2	72.390	-14 36 00.84	0.09	2	72.390				13540	
15881	+ 4	3168	8.8	K0	20 32.794	0.03	2	71.993	+ 4 42 21.50	0.23	2	71.993				13541	
15882	-38	10983	5.40	G0	20 37.810	0.17	6	70.735	-39 04 40.25	0.10	6	70.735	3295	22030	3671	33295	
15883	+ 4	3169	8.8	F2	20 40.337	-	1	71.450	+ 4 12 14.37	-	1	71.450				13542	
15884	-29	12503	8.0	K2	16 20 42.236	0.19	4	69.965	-30 03 58.27	0.05	4	69.965				13543	
15885	+ 1	3220	8.9	G5	20 52.535	0.13	2	72.060	+ 1 39 48.28	0.04	2	72.060		22036		13544	
15886	-83	604	7.88	F0	20 54.933	0.13	4	70.791	-83 28 54.27	0.21	4	70.791		22037		19850	
15886	SP				20 55.189	0.09	4	70.186	-83 28 54.41	0.16	4	70.186		22037		19850	
15887	- 1	3178	8.5	K0	21 07.576	0.25	2	72.463	- 2 09 00.25	0.18	2	72.463				13545	
15888	-41	10635	9.5	G5	16 21 10.298	0.11	4	70.359	-42 06 53.98	0.09	4	70.359				1951	
15889	-23	12858	8.8	G0	21 12.841	0.04	4	69.886	-23 23 06.90	0.19	4	69.886				13546	
15890	-34	10979	7.54	F5	21 15.222	0.14	4	70.310	-35 03 38.73	0.19	4	70.310		22045		13547	
15891	-10	4309	7.8	F2	21 18.280	0.09	3	72.127	-10 54 32.72	-	1	72.525				13548	
15892	-50	10505	8.5	K0	21 18.338	0.09	4	69.784	-50 48 35.84	0.13	4	69.784				1952	
15893	-24	12682	8.4	B8	16 21 19.207	0.14	4	69.956	-24 54 38.66	0.04	4	69.956				13549	
15894	- 8	4227	8.6	K2	21 24.437	0.23	2	71.904	- 8 59 20.34	0.21	2	71.904				13550	
15895	-11	4129	7.7	F2	21 25.423	0.25	2	71.406	-11 46 58.85	0.01	2	71.406				13551	
15896	-26	11327	7.34	A0	21 25.540	0.10	4	70.212	-27 02 11.58	0.05	4	70.212		22049	3673	13552	
15897	-22	4162	7.8	F8	21 25.890	0.16	4	70.031	-22 32 24.97	0.29	4	70.031				13553	
15898	-62	5331	8.4	K0	16 21 27.904	0.23	4	69.454	-62 18 27.94	0.19	4	69.454				13554	
15899	-35	10925	9.2	G5	21 30.552	0.19	4	69.818	-35 58 11.91								

15850 3.1m to 3.2m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
15902	+	7 3164	5.72	A0	16 21 44.532	0.03	66	71.725	+ 7 03 44.69	0.04	63	71.711	1429	22058	3675	31429
15903	+	0 3517	8.8	K5	21 50.508	0.07	2	71.458	- 0 04 56.77	0.32	2	71.458				13557
15904	-	2 4179	7.00	F2	22 03.165	0.01	2	70.447	- 2 22 26.61	0.09	2	70.447		22064	3677	13558
15905	-	27 10931	8.5	K2	22 10.854	0.07	4	70.135	-27 36 27.76	0.14	4	70.135				13559
15906	-	40 10388	9.13	F8	22 11.022	0.19	4	70.656	-40 40 10.28	0.05	4	70.656		22067		1954
15907	-	46 10732	8.5	A0	16 22 14.537	0.04	3	70.605	-46 50 14.85	0.14	3	70.605				1955
15908	-	11 4132	8.7	K5	22 17.257	0.06	2	72.432	-11 46 06.50	0.09	2	72.432				13560
15909	-	24 12684	8.1	B3	22 22.837	0.09	6	71.945	-24 21 07.64	0.11	6	71.945				21132
15910*	-	23 12860	6.56	B3	22 24.085	0.15	4	71.207	-23 20 47.97	0.07	4	71.207		22070		21133
15911	-	15 4320	9.0	A0	22 25.325	0.14	2	72.481	-16 04 37.96	0.55	2	72.481				13561
15912	-	21 4353	9.0	A0	16 22 26.146	0.09	4	71.333	-21 34 30.11	0.05	4	71.333				13562
15913	-	53 7975	7.9	M0	22 26.665	0.18	4	70.592	-53 19 10.08	0.10	4	70.592				13563
15914	-	33 11167	7.99	G0	22 30.969	0.13	4	70.130	-33 27 13.86	0.13	4	70.130		22075		13565
15915	-	12 4501	8.5	K2	22 31.004	0.04	2	72.066	-13 03 57.91	0.13	2	72.066				13564
15916	-	19 4368	8.8	A0	22 31.041	0.30	2	72.481	-19 43 25.82	0.04	2	72.481				13566
15917	-	29 12529	7.56	B8	16 22 31.049	0.09	6	71.385	-29 17 13.86	0.12	5	71.414		22076		21134
15918†	-	23 12861	5.22	B5	22 34.932	0.08	5	71.292	-23 20 01.77	0.17	5	71.292		22079		21135
15919	-	23 12862	7.13	A	22 34.953	0.12	4	70.930	-23 17 30.55	0.11	4	70.930		22080		13567
15920	-	66 2954	8.3	G0	22 36.369	0.21	4	70.448	-66 13 32.89	0.30	4	70.448				19852
15921	-	45 10649	7.56	K5	22 43.229	0.12	4	70.168	-45 40 43.18	0.13	4	70.168		22082		1956
15922	-	15 4321	8.9	F8	16 22 43.672	0.08	2	72.412	-15 58 18.51	0.32	2	72.412				13568
15923	+	1 3228	8.4	K0	22 46.789	0.19	2	70.886	+ 1 19 55.35	0.09	2	70.886		22084		13569
15924	-	9 4385	8.2	A0	22 53.650	0.14	2	72.314	- 9 58 16.25	0.05	2	72.314		22086		13570
15925	-	3 3939	7.7	F0	22 55.360	0.29	2	72.300	- 3 45 12.85	0.12	2	72.300				13571
15926	-	34 10991	8.9	G0	22 56.821	0.19	4	70.609	-34 49 59.62	0.08	4	70.609				13572
15927	-	69 2558	4.93	G0	16 23 04.631	0.05	46	71.157	-69 58 26.34	0.04	45	71.125	610	22089	3678	30610
15928	+	14 3049	4.53	A0p	23 06.419	0.03	80	70.998	+14 08 48.02	0.03	78	70.977	613	22090	3679	80613
15929	-	50 10543	8.7	K2	23 08.378	0.05	4	70.980	-50 15 15.42	0.12	4	70.980				1957
15930	-	5 4293	8.4	K2	23 10.464	0.22	2	72.817	- 5 58 56.95	0.17	2	72.817				13573
15931	-	61 5683	7.7	K2	23 29.047	0.10	4	70.946	-61 30 52.31	0.19	4	70.946				13574
15932	-	47 10763	9.3	K5	16 23 29.271	0.06	4	71.130	-47 39 12.74	0.19	4	71.130				1958
15933	-	7 4284	8.4	K5	23 29.762	0.25	2	71.948	- 8 05 22.83	-	1	71.600				13575
15934	-	47 10765	4.80	B5	23 30.480	0.16	6	71.627	-47 26 34.46	0.12	6	71.627		22106		21136
15935	-	11 4135	8.4	K5	23 32.487	0.30	3	72.477	-11 22 26.81	0.16	3	72.477				13576
15936	-	32 11714	9.1	A0	23 33.046	0.18	4	70.591	-32 57 40.07	0.15	4	70.591				13577
15937	-	51 10189	8.7	K2	16 23 35.076	0.11	4	70.259	-51 38 08.53	0.02	4	70.259				1959
15938	-	4 4110	8.9	K2	23 37.531	0.42	2	72.263	- 4 33 49.69	0.02	2	72.263				13578
15939	-	60 6530	7.9	K2	23 37.534	0.21	4	71.389	-60 37 40.34	0.05	4	71.389				13579
15940	-	42 11285	9.0	K2	23 40.787	0.03	4	70.990	-42 21 23.34	0.20	4	70.990				1960
15941	-	18 4281	8.7	G5	23 45.724	0.09	2	72.806	-19 01 12.31	0.18	2	72.806				13580
15942	-	30 13151	9.0	K2	16 23 47.795	0.04	4	70.666	-31 01 14.25	0.09	4	70.666				13581
15943	+	2 3103	6.56	A0	23 50.189	0.00	2	72.769	+ 2 37 10.66	0.00	2	72.769		22113	3681	13582
15944	-	67 3117	8.2	K2	23 51.667	0.11	4	70.082	-67 22 22.05	0.19	4	70.082				19853
15945	-	39 10438	9.1	K5	23 51.934	0.10	4	71.276	-39 11 56.83	0.20	4	71.276				13583
15946	-	58 6800	5.78	B9	24 01.255	0.06	7	71.035	-58 29 19.10	0.16	6	70.999	3297	22116	3682	33297
15947*	-	13 4429	8.6	A3	16 24 01.838	0.00	2	72.404	-13 44 12.39	0.02	2	72.404				13584
15948	-	25 11508	8.0	K0	24 03.693	0.20	4	70.219	-26 08 45.98	0.09	4	70.219				13585
15949*	-	37 10800	8.5	G5	24 05.614	0.15	4	70.955	-37 21 55.69	0.23	4	70.955				13586
15950	-	18 4282	4.85	B3p	24 07.293	0.08	6	70.037	-18 20 40.48	0.05	6	70.037	3298	22117		33298
15951	-	29 12549	8.5	K0	24 15.611	0.13	4	70.017	-29 15 30.91	0.15	4	70.017				13587
15952	-	29 12551	6.90	B9	16 24 21.620	0.18	5	70.546	-29 10 37.43	0.14	5	70.546		22126		13588
15953	-	48 10854	9.0	K0	24 29.265	0.07	4	70.684	-48 38 07.89	0.11	4	70.684				1961
15954	-	3 3943	8.8	K5	24 46.499	0.38	2	72.101	- 3 25 49.96	0.00	2	72.101				13589
15955	-	76 1162	8.6	K2	24 53.891	0.11	5	71.336	-76 14 49.53	0.14	4	71.359				19854
15955 SP					24 53.990	0.40	5	70.540	-76 14 49.78	0.17	4	70.651				19854
15956	-	17 4574	9.2	A2	16 24 59.739	0.01	2	72.807	-17 25 12.69	0.08	2	72.807				13590
15957	+	3 3199	6.64	K5	25 01.603	0.18	2	72.488	+ 2 58 53.06	0.20	2	72.488		22132		13591
15958	-	8 4243	4.68	A2	25 05.567	0.07	5	70.261	- 8 15 40.49	0.08	5	70.261	3299	22134		33299
15959	-	0 3118	9.0	A2	25 07.429	0.16	2	72.448	- 0 40 36.46	0.00	2	72.448				13592
15960	-	38 11001	8.7	K2	25 15.504	0.12	3	70.389	-38 15 58.00	0.14	3	70.389				13593
15961	+	2 3107	8.5	K5	16 25 21.058	0.19	2	72.386	+ 2 25 12.00	0.26	2	72.386				13594
15962	-	56 7719	8.5	G5	25 23.623	0.05	4	69.364	-56 41 21.69	0.13	4	69.364				13595
15963*	-	15 4324	7.11	F5	25 24.541	0.08	3	72.968	-16 06 06.99	0.41	3	72.968		22139	3683	13596
15964	-	35 10969	7.7	M0	25 28.428	0.15	4	70.964	-35 34 48.81	0.24	4	70.964				13597
15965	-	34 11019	9.1	K0	25 32.284	0.18	4	71.151	-34 27 30.20	0.12	4	71.151				13598
15966	-	36 10792	8.9	K0	16 25 36.492	0.06	3	70.449	-37 03 37.32	0.12	3	70.449				13599
15967	-	41 10674	9.1	K2	25 41.410	0.14	4	71.383	-41 30 55.53	0.22	4	71.383				1962
15968	-	78 1103	3.90	K0	25 41.673	0.04	69	71.283	-78 47 22.13	0.03	68	71.270	611	22142	3684	30611
15968 SP					25 41.641	0.06	36	71.361	-78 47 22.20	0.09	34	71.330	611	22142	3684	50611
15969	-	52 9884	8.15	K2	25 52.426	0.16	4	69.826	-52 17 45.01	0.18	4	69.826		22146		13600
15970	-	35 10975	8.4	K5	16 25 56.660	0.04	4	70.299	-35 21 47.29	0.22	4	70.299				13601
15971	-	24 12691	8.2	G5	25 57.408	0.12	5	70.831	-24 25 37.44	0.15	5	70.831				13602
15972	-	1 3197	8.9	K5	25 58.024	0.15	2	72.764	- 1 12 01.67	0.07	2	72.764				13603
15973	+	0 3529	5.47	K2	26 00.948	0.09	6	71.366	+ 0 46 30.42	0.12	6	71.366	3300	22148		33300
15974	-	45 10697	5.46	B1p	26 04.427	0.11	6	70.254	-46 08 03.44	0.10	6	70.254	3301	22150	3685	33301

15910 A 10045, 6.9m-8.1m, 0°8.

15918 A 10049A, 5.92m, 3°9, 342°.

15947 9.6m-9.6m, 0°1.

15949 9.3m-9.3m, 0°2, 322°.

15963 7.6m-8.4m, 0°3, 56°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
15975	+	0 3530	6.64	K5	16 26 08.774	0.05	3	72.744	+ 0 09 54.01	0.24	3	72.744		22154		13604
15976	-	5 4304	8.2	K5	26 08.974	0.17	2	71.814	- 5 20 10.23	0.39	2	71.814				13605
15977*	-	26 11359	1.22	*	26 20.205	0.04	22	70.968	-26 19 22.39	0.08	22	70.968	616	22157	3686	30616
15978	-	21 4366	8.3	F5	26 21.739	0.07	4	70.570	-21 27 35.51	0.07	4	70.570				13606
15979	-	61 5701	5.11	K0	26 21.820	0.05	7	70.199	-61 31 31.06	0.07	6	70.023	3302	22159	3687	33302
15980	-	13 4440	7.1	K2	16 26 37.145	0.15	2	72.421	-13 27 41.80	0.09	2	72.421				13607
15981	-	17 4585	9.1	A0	26 45.531	0.07	2	71.939	-18 07 53.51	0.01	2	71.939				13608
15982	-	21 4368	8.6	K0	26 48.137	0.17	4	70.907	-21 20 18.36	0.07	4	70.907				13609
15983	-	18 4287	8.1	G0	26 48.564	0.17	2	72.295	-18 34 13.60	0.14	2	72.295				13610
15984	-	14 4431	9.0	A2	26 49.744	0.08	3	73.131	-14 28 35.46	0.32	2	72.987				13611
15985	-	69 2573	8.4	M1	16 26 51.070	0.13	4	69.932	-69 39 30.17	0.19	4	69.932				19855
15986	-	43 10840	7.86	M0	26 51.502	0.11	4	69.980	-44 00 27.45	0.10	4	69.980	22169			1963
15987	-	24 12693	8.2	A2	26 52.253	0.10	4	70.639	-24 52 15.46	0.14	4	70.639				13612
15988	-	24 12694	7.32	B9	26 56.651	0.08	5	71.841	-25 02 21.38	0.10	5	71.841	22170			21137
15989	-	14 4433	5.75	G0	26 57.164	0.09	9	71.072	-14 26 33.31	0.07	9	71.072	1430	22171	3689	31430
15990	-	10 4327	6.74	B9	16 27 02.658	0.01	2	71.993	-11 01 16.24	0.07	2	71.993	22174			13613
15991	+	4 3191	7.90	G5	27 05.896	0.06	2	72.942	+ 4 41 04.13	0.03	2	72.942				13614
15992	-	27 10967	6.79	B8	27 09.338	0.07	3	70.605	-27 48 29.00	0.13	3	70.605	22178			21138
15993	-	24 12695	4.87	B3	27 09.898	0.05	3	70.607	-25 00 25.21	0.07	3	70.607	22179			21139
15994*	-	60 6546	9.1	F5	27 13.565	0.14	4	70.531	-60 35 01.78	0.15	4	70.531				13615
15995	-	49 10735	8.0	K5	16 27 17.351	0.11	4	70.612	-49 52 24.96	0.21	4	70.612				1964
15996	-	0 3127	8.4	F8	27 27.584	0.25	2	72.028	- 0 41 33.74	0.02	2	72.028				13616
15997	-	26 11369	8.0	K2	27 29.646	0.05	4	70.654	-27 04 07.44	0.21	4	70.654				13617
15998	-	29 12590	7.7	A2	27 33.521	0.14	5	71.258	-29 22 31.33	0.12	5	71.258				13618
15999	-	33 11217	8.8	K5	27 35.399	0.05	4	71.125	-33 13 40.98	0.21	4	71.125				13619
16000	-	5 4309	8.3	F0	16 27 47.113	0.09	2	71.399	- 5 59 07.22	0.08	2	71.399				13620
16001	-	86 329	9.1	M2	27 57.181	0.11	5	71.245	-87 02 27.16	0.12	5	71.245				19856
16001 SP					27 57.282	0.27	4	69.341	-87 02 26.96	0.13	4	69.341				19856
16002	-	40 10472	9.0	K5	27 57.265	0.10	4	70.934	-40 32 26.49	0.08	4	70.934				1965
16003	-	56 7736	8.0	G5	27 58.784	0.08	4	70.575	-57 07 44.43	0.10	4	70.575				13621
16004	-	70 2255	8.0	G5	16 27 59.819	0.18	4	69.832	-71 01 54.15	0.08	4	69.832				19857
16005	-	29 12594	8.6	F5	28 01.770	0.09	4	70.939	-29 53 26.27	0.14	4	70.939				13622
16006	-	10 4332	8.7	A2	28 02.272	0.01	2	70.570	-10 41 28.03	0.21	2	70.570				13623
16007	+	21 2934	2.81	K0	28 03.940	0.07	5	69.999	+21 35 49.64	0.18	4	69.351	618	22193	3696	30618
16008	-	8 4251	8.5	K0	28 05.728	0.10	2	72.487	- 8 59 35.43	0.00	2	72.487				13624
16009	-	34 11044	4.33	B3	16 28 06.521	0.02	92	71.402	-34 35 50.63	0.03	90	71.394	1431	22195	3698	31431
16010	-	3 3953	8.0	F8	28 06.697	0.01	2	71.918	- 3 34 19.77	0.07	2	71.918				13625
16011*	-	1 3202	8.9	G5	28 12.822	0.02	2	70.469	- 2 11 51.50	0.28	2	70.469				13626
16012	-	42 11339	8.5	G5	28 17.648	0.15	4	70.975	-42 38 01.16	0.09	4	70.975				1966
16013	-	58 6824	8.4	K0	28 18.508	0.11	4	69.333	-58 49 38.62	0.18	4	69.333				13627
16014	-	35 11000	9.1	K0	16 28 19.236	0.10	4	71.552	-35 59 46.77	0.26	4	71.552				13628
16015	-	48 10911	9.1	K5	28 22.021	0.15	4	71.256	-48 42 09.94	0.04	4	71.256				1967
16016	-	44 10926	7.42	M0	28 24.224	0.15	4	71.155	-44 46 49.46	0.09	4	71.155	22204			1968
16017	-	31 12953	8.8	K0	28 28.352	0.07	4	69.880	-31 32 46.74	0.14	4	69.880				13629
16018	-	72 1958	8.1	K2	28 34.156	0.17	4	69.841	-72 48 34.50	0.16	4	69.841				19858
16019	-	22 4173	8.2	G5	16 28 37.644	0.04	4	70.450	-22 41 41.39	0.06	4	70.450				13630
16020	-	17 4591	8.6	B9	28 45.284	0.14	2	72.422	-17 36 25.31	0.02	2	72.422				13631
16021	-	70 2256	5.57	K0	28 46.485	0.10	6	69.297	-70 52 59.48	0.05	6	69.297	3306	22212	3700	33306
16021 SP					28 46.459	0.08	37	71.490	-70 52 59.64	0.13	35	71.466	3306	22212	3700	53306
16022	+	1 3246	7.9	K0	28 48.886	0.21	2	71.971	+ 1 24 54.00	0.07	2	71.971				13632
16023	-	25 11528	8.2	F8	16 28 50.155	0.05	4	69.979	-25 54 18.94	0.14	4	69.979				13633
16024	-	31 12963	8.7	K2	29 01.511	0.06	5	71.226	-32 02 01.57	0.24	5	71.226				13634
16025	-	50 10634	8.2	K0	29 03.434	0.14	5	70.722	-50 53 32.40	0.08	5	70.722				1969
16026	-	1 3207	8.6	A5	29 10.072	0.22	2	71.987	- 1 55 10.10	0.04	2	71.987				13635
16027	-	21 4381	4.57	F0	29 10.126	0.13	6	69.301	-21 21 39.14	0.23	6	69.301	3307	22221		33307
16028	-	47 10844	8.9	K5	16 29 13.962	0.16	4	70.693	-47 11 35.08	0.11	4	70.693				1970
16029	+	0 3537	7.98	K2	29 15.869	0.34	2	70.401	+ 0 03 47.93	0.07	2	70.401				13636
16030	-	9 4406	7.24	F5	29 16.733	0.10	2	71.485	- 9 35 25.44	0.22	2	71.485	22227			13637
16031	-	51 10285	8.0	K0	29 25.316	0.06	4	69.915	-51 13 54.55	0.04	4	69.915				1971
16032	-	29 12614	9.1	K0	29 26.724	0.06	4	69.965	-30 05 20.99	0.19	4	69.965				13638
16033	-	20 4506	8.5	K0	16 29 28.989	0.05	4	69.913	-20 38 48.13	0.15	4	69.913				13639
16034	-	39 10473	8.68	G0	29 33.682	0.31	5	71.318	-39 14 46.81	0.18	5	71.318	22234			13640
16035	-	60 6566	8.7	K0	29 33.752	0.10	4	69.443	-60 10 14.11	0.12	4	69.443				13641
16036	+	3 3213	7.9	A2	29 33.844	0.29	2	71.462	+ 3 28 03.09	0.25	2	71.462				13642
16037	-	38 11025	9.2	G5	29 36.930	0.07	4	70.623	-38 50 54.24	0.08	4	70.623				13643
16038	-	45 10737	8.5	K0	16 29 38.538	0.15	4	70.753	-45 43 21.54	0.20	4	70.753				1972
16039	-	65 3327	8.2	F8	29 56.885	0.10	4	69.531	-65 46 20.46	0.22	4	69.531				19859
16040	-	73 1734	8.8	G0	29 59.830	0.10	4	69.441	-73 22 56.54	0.06	4	69.441				19860
16041	-	36 10822	7.9	F0	30 06.075	0.15	4	71.286	-37 08 24.83	0.24	4	71.286				13644
16042	-	27 10986	8.4	K0	30 06.792	0.07	4	69.933	-28 00 38.10	0.10	4	69.933				13645
16043	+	5 3223	5.56	B8	16 30 07.911	0.09	6	70.579	+ 5 37 34.54	0.09	6	70.579	3309	22244		33309
16044	-	10 4336	6.76	A5	30 10.435	0.05	3	70.447	-10 27 28.06	0.13	2	70.902		22247		13646
16045	-	46 10834	7.5	K5	30 11.886	0.07	4	70.284	-46 27 15.84	0.15	4	70.284				1973
16046	+	11 3008	4.92	K5	30 15.491	0.05	7	70.987	+11 35 37.03	0.14	6	70.942	3310	22250		33310
16047	-	52 10004	7.9	K2	30 17.312	0.09	4	69.855	-52 31 03.12	0.28	4	69.855				13647

15977 Antares A 10074, 5.2m; B1r-c.g. =
+0.031a, -0.04 (FK4), M0+A3.

15994 9.2m-10.2m, 0.5, 253°.
16011 9.0m-11.0m, 1.3, 171°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R	A	1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decd	1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16048	+	2 3127	7.9	G0	16	30	19.596	0.10	2	69.983	+	2 11 25.03	0.10	2	69.983		22252		13648
16049	+	2 3128	8.5	K0		30	30.579	0.01	2	71.010	+	2 39 20.13	0.33	2	71.010				13649
16050	-	43 10900	5.15	B0p		30	31.380	0.07	6	68.958	-	43 56 28.84	0.10	6	68.958	3311	22258	3703	33311
16051	-	6 4456	8.4	F2		30	31.867	0.01	2	71.896	-	6 50 41.89	0.35	2	71.896				13650
16052	-	34 11076	7.7	F0		30	32.234	0.15	4	70.299	-	34 20 11.16	0.04	4	70.299				13651
16053	-	35 11022	7.77	G5	16	30	34.030	0.15	4	70.527	-	35 26 18.56	0.18	3	69.938		22259		13652
16054	-	1 3210	9.0	G5		30	38.368	0.10	2	71.451	-	1 30 54.13	0.10	2	71.451				13653
16055	-	13 4453	8.8	K5		30	40.206	0.05	2	71.885	-	14 03 41.33	0.05	2	71.885				13654
16056	-	38 11039	8.2	K2		30	43.577	0.21	4	69.916	-	38 21 07.79	0.16	4	69.916				13655
16057	-	12 4546	7.60	K5		30	43.710	0.01	2	69.969	-	12 27 22.12	0.19	2	69.969		22261		13656
16058	-	58 6836	8.7	F8	16	30	47.774	0.18	4	70.142	-	58 44 56.18	0.08	4	70.142				13657
16059	-	49 10784	8.0	G5		30	50.276	0.16	4	69.949	-	49 13 09.84	0.12	4	69.949				1974
16060	-	65 3331	5.38	K0		30	54.916	0.10	6	69.188	-	65 23 32.52	0.04	6	69.188	3312	22264	3704	33312
16061	-	64 3521	8.7	G5		30	56.874	0.11	4	70.082	-	64 37 06.60	0.16	4	70.082				19861
16062	-	24 12707	8.6	K0		31	09.811	0.13	4	69.378	-	24 53 49.82	0.13	4	69.378				13658
16063	-	15 4340	8.7	K2	16	31	11.294	0.61	2	71.938	-	15 25 24.85	0.10	2	71.938				13659
16064	-	4 4128	7.8	K0		31	15.884	0.01	2	71.929	-	4 57 07.30	0.27	2	71.929				13660
16065	-	3 3964	8.2	K0		31	20.273	0.05	2	69.957	-	3 41 11.65	0.03	2	69.957			3706	13661
16066	-	62 5387	7.9	G5		31	29.315	0.05	4	69.838	-	62 26 16.70	0.16	4	69.838				13662
16067	-	65 3333	8.5	K0		31	32.576	0.10	4	70.231	-	65 43 30.55	0.05	4	70.231				19862
16068		-78 1107	9.1	K0	16	31	51.072	0.08	4	71.366	-	78 28 31.64	0.18	4	71.366				19863
16068	SP					31	51.055	0.36	5	70.659	-	78 28 31.91	0.31	4	70.799				19863
16069	-	7 4324	7.82	K2		31	51.094	0.45	2	71.944	-	8 02 46.51	0.54	2	71.944		22283		13663
16070	-	19 4381	8.6	K2		31	51.266	0.05	2	71.949	-	19 50 17.30	0.04	2	71.949				13664
16071	-	41 10736	8.2	K0		31	52.987	0.13	4	70.330	-	41 40 16.57	0.04	4	70.330				1975
16072	+	4 3211	8.8	G0	16	31	58.792	0.15	2	71.942	+	4 00 32.37	0.10	2	71.942				13665
16073	-	52 10033	8.5	K0		32	01.427	0.10	6	70.802	-	53 01 50.40	0.14	5	70.686				13666
16074	-	60 6578	9.0	G5		32	02.256	0.14	4	70.968	-	60 48 18.41	0.09	4	70.968				13667
16075*	-	26 11412	8.4	B9		32	10.534	0.09	5	70.766	-	26 22 33.21	0.10	4	70.648				13668
16076	-	29 12652	7.6	K0		32	16.106	0.14	4	70.485	-	29 25 43.05	0.15	4	70.485				13669
16077	-	53 8076	8.1	K0	16	32	26.483	0.13	4	70.810	-	54 06 57.38	0.17	4	70.810				13670
16078	-	70 2265	9.2	M2		32	27.649	0.07	4	70.990	-	70 47 00.38	0.20	4	70.990				19864
16079	-	15 4346	8.5	A0		32	29.813	0.06	2	70.446	-	16 09 53.39	0.03	2	70.446				13671
16080	-	21 4389	8.6	F5		32	30.503	0.05	3	70.487	-	21 46 29.75	0.09	3	70.487				13672
16081	-	37 10850	8.5	G5		32	34.688	0.06	4	70.303	-	37 15 39.20	0.08	4	70.303				13673
16082	-	18 4295	8.4	G5	16	32	35.120	0.17	2	70.575	-	18 34 14.00	0.34	2	70.575				13674
16083	-	27 11015	2.91	B0		32	45.886	0.02	99	71.157	-	28 06 50.95	0.03	97	71.134	620	22303	3713	80620
16084	-	55 7607	8.6	K2		32	46.037	0.11	4	69.960	-	55 49 54.24	0.04	4	69.960				13675
16085	-	25 11559	8.4	K2		32	49.172	0.19	4	70.708	-	25 16 46.69	0.18	4	70.708				13676
16086f	-	43 10932	8.0	K2		32	52.271	0.08	4	69.915	-	43 38 35.89	0.12	4	69.915				1976
16087	-	44 10979	8.35	K2	16	33	00.012	0.05	4	69.935	-	44 53 34.03	0.10	4	69.935		22308		1977
16088	-	59 6779	8.9	A0		33	07.022	0.14	5	71.481	-	59 09 43.19	0.22	5	71.481				13677
16089	+	17 3053	6.27	A0		33	11.681	0.09	6	69.962	+	17 09 31.98	0.34	6	69.962	3313	22314	3714	33313
16090	-	31 13043	8.8	K0		33	23.038	0.12	4	71.450	-	31 23 21.43	0.20	4	71.450				13678
16091	-	0 3143	8.9	G0		33	23.377	0.05	2	72.496	-	0 18 38.22	0.55	2	72.496				13679
16092	-	62 5393	8.5	K0	16	33	23.747	0.10	4	70.670	-	63 02 55.41	0.08	4	70.670				13680
16093	-	30 13285	9.0	A2		33	26.499	0.09	4	71.271	-	30 28 57.84	0.07	4	71.271				13681
16094	+	1 3263	7.9	F5		33	31.101	0.11	2	70.448	+	1 28 59.56	0.16	2	70.448		22319		13682
16095	-	2 4211	5.87	K0		33	44.330	0.05	22	71.703	-	2 13 16.64	0.07	21	71.621	1433	22321	3716	31433
16096	-	49 10833	8.9	K0		33	52.275	0.16	4	70.666	-	49 11 29.49	0.16	4	70.666				1978
16097	-	13 4459	7.3	F8	16	33	56.361	0.10	2	70.440	-	13 37 13.11	0.32	2	70.440				13683
16098	+	2 3140	8.6	G5		34	07.288	0.03	2	72.863	+	2 08 01.06	0.28	2	72.863				13684
16099	-	32 11852	9.0	K2		34	07.365	0.10	4	71.103	-	32 16 34.93	0.10	4	71.103				13685
16100	-	5 4323	8.0	G5		34	08.011	0.34	2	72.297	-	6 11 38.40	0.18	2	72.297		22326		13686
16101	-	42 11417	8.9	K5		34	08.308	0.15	4	70.185	-	42 51 05.09	0.14	4	70.185				1979
16102	-	51 10360	8.57	K0	16	34	09.627	0.16	4	68.862	-	51 26 15.88	0.20	4	68.862		22329		1980
16103	-	8 4274	8.4	K2		34	12.592	-	1	73.340	-	8 47 11.33	-	1	73.340				13687
16104	+	4 3221	8.7	K0		34	21.825	0.13	2	73.331	+	4 27 46.31	0.32	2	73.331				13688
16105	-	2 4213	8.5	A0		34	23.564	0.10	2	71.992	-	2 33 44.92	0.11	2	71.992				13689
16106	-	10 4350	2.70	B0		34	24.153	0.03	55	71.351	-	10 28 02.20	0.04	53	71.355	622	22332	3717	80622
16107	-	44 11003	7.94	K0	16	34	28.099	0.12	4	70.713	-	44 12 02.69	0.09	4	70.713		22336		1981
16108	-	11 4175	8.2	K5		34	29.114	0.04	2	72.465	-	11 14 28.85	0.19	2	72.465				13690
16109	+	0 3553	7.5	K0		34	34.803	0.07	2	71.987	+	0 21 13.31	0.17	2	71.987				13691
16110	-	18 4298	8.6	A0		34	40.106	0.08	2	71.951	-	18 16 16.90	0.31	2	71.951				1: 692
16111	+	0 3554	8.9	K0		34	40.150	0.06	2	72.487	+	0 03 17.81	0.21	2	72.487				13693
16112	-	39 10530	8.9	K0	16	34	42.464	0.05	4	70.937	-	39 23 54.21	0.29	4	70.937				13694
16113	-	16 4317	8.6	K0		34	44.568	0.06	3	71.210	-	16 45 01.05	0.18	3	71.210				13695
16114	-	33 11306	9.2	G5		34	49.682	0.15	4	70.974	-	33 55 12.67	0.26	4	70.974				13696
16115	-	40 10557	9.2	K5		34	51.755	0.13	4	70.935	-	40 10 06.31	0.08	4	70.935				1982
16116	-	43 10959	6.14	B3		34	53.587	0.09	6	71.784	-	43 17 57.44	0.15	6	71.784		22347	3721	21140
16117	-	74 1555	8.5	K0	16	35	02.368	0.11	4	69.741	-	74 20 23.68	0.16	4	69.741				19865
16118	-	50 10712	9.0	F5		35	04.996	0.13	4	69.813	-	50 43 51.67	0.23	4	69.813				1983
16119	-	36 10872	8.9	K2		35	07.902	0.19	4	70.862	-	36 17 51.02	0.11	4	70.862				13697
1612																			

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
16122	-22	4182	7.59	F2	16 35 19.196	0.05	4	69.421	-22 47 36.91	0.12	4	69.421		22358		13698
16123	-6	4467	6.00	A0	35 20.702	0.18	6	69.137	-6 26 20.18	0.07	6	69.137	3315	22360	3722	33315
16124	-53	8110	8.7	K0	35 21.468	0.08	4	69.417	-53 16 27.50	0.23	4	69.417				13699
16125	-74	1556	9.0	K2	35 26.766	0.10	6	71.496	-75 01 23.53	0.11	5	71.547				19866
16125	SP				35 26.824	0.15	4	68.679	-75 01 23.75	0.26	4	68.679				19866
16126	-14	4463	8.0	F0	16 35 27.857	0.02	2	71.464	-14 34 55.32	0.24	2	71.464	3316	22361	3723	13700
16127	+13	3177	6.20	F2	35 29.545	0.09	7	70.804	+13 47 11.58	0.18	6	70.728				33316
16128	-46	10902	8.5	K0	35 29.652	0.17	4	70.709	-46 56 10.52	0.11	4	70.709				1986
16129	-56	7802	8.4	K2	35 30.456	0.13	4	69.381	-56 50 11.97	0.14	4	69.381				13701
16130	-23	12880	8.4	F0	35 31.892	0.10	4	69.467	-24 01 58.92	0.16	4	69.467				13702
16131	-52	10093	8.0	K2	16 35 40.755	0.12	4	69.420	-52 19 10.37	0.14	4	69.420				13703
16132	-66	2994	8.3	K0	35 41.248	0.21	4	70.640	-66 10 55.58	0.20	4	70.640				19867
16133	-2	4219	8.2	G0	35 41.372	0.01	2	69.940	-2 20 28.10	0.15	2	69.940		22367		13704
16134	-45	10815	9.9	G5	35 41.518	0.02	4	70.730	-45 47 27.56	0.12	4	70.730				1987
16135	-36	10879	6.10	A0	35 44.070	0.06	6	70.403	-37 07 07.78	0.11	6	70.403	3317	22368		33317
16136	-73	1744	8.7	A0	16 35 44.563	0.03	4	70.691	-73 20 09.11	0.11	4	70.691				19868
16137	+27	2661	7.08	M0	35 47.162	0.16	6	69.208	+27 08 34.56	0.15	6	69.208	3318	22369		33318
16138	-4	4139	8.4	K2	35 48.184	0.14	2	71.919	-4 29 35.13	0.13	2	71.919				13705
16139	-77	1221	4.16	K0	35 51.236	0.06	6	69.477	-77 25 07.09	0.11	6	69.477	3319	22370	3724	33319
16139	SP				35 51.118	0.10	6	70.089	-77 25 07.19	0.23	6	70.089	3319	22370	3724	53319
16140	-57	8098	7.7	K5	16 35 54.974	0.21	4	70.181	-57 12 27.06	0.14	4	70.181				13706
16141	-28	12267	8.45	K0	35 58.828	0.05	4	69.894	-28 48 20.71	0.08	4	69.894		22373		13707
16142	-21	4394	9.1	F8	36 01.369	0.09	4	69.458	-21 56 45.78	0.06	4	69.458				13708
16143	-10	4358	8.8	K0	36 03.637	0.07	2	70.422	-10 20 26.67	0.14	2	70.422				13709
16144	-29	12708	7.18	A3	36 06.673	0.15	4	70.387	-29 49 35.10	0.09	4	70.387		22377		13710
16145	-68	2788	8.5	K0	16 36 08.372	0.13	4	70.113	-68 39 46.73	0.29	4	70.113				19869
16146	-0	3155	8.5	G5	36 16.728	0.07	2	70.405	-0 44 12.82	0.45	2	70.405				13711
16147	-12	4563	8.4	F8	36 24.386	0.08	2	69.978	-12 14 16.94	0.22	2	69.978				13712
16148	-37	10899	8.9	K2	36 25.468	0.10	4	69.935	-37 39 12.58	0.14	4	69.935				13713
16149	-32	11883	9.2	G5	36 29.560	0.18	4	69.955	-32 53 37.49	0.13	4	69.955				13714
16150	+3	3240	8.1	K2	16 36 53.375	0.02	2	71.906	+3 29 22.62	0.30	2	71.906				13715
16151	-9	4430	6.38	F5	36 54.813	0.64	2	70.526	-9 27 22.58	0.06	2	70.526		22394		13716
16152	-3	3974	8.0	B9	37 04.773	0.14	2	71.957	-3 31 20.90	0.55	2	71.957				13717
16153	-67	3190	8.25	K5	37 07.310	0.10	4	70.460	-67 23 23.01	0.27	4	70.460		22402		19870
16154	-26	11460	8.0	K0	37 08.519	0.14	4	69.907	-26 13 31.18	0.12	4	69.907				13718
16155	-63	3993	8.6	K0	16 37 14.686	0.14	4	70.142	-63 18 23.54	0.15	4	70.142				13719
16156	-39	10566	8.09	G5	37 16.198	0.14	4	70.579	-39 47 10.36	0.11	3	70.006		22407		13720
16157	-23	12887	8.9	A0	37 16.447	0.13	4	70.464	-23 47 57.04	0.08	4	70.464				13721
16158	-33	11349	8.6	K2	37 19.469	0.03	4	70.323	-33 48 09.46	0.09	4	70.323				13722
16159	-5	4334	6.79	F8	37 21.447	0.13	2	71.978	-5 59 01.63	0.08	2	71.978		22409		13723
16160	-61	5761	9.0	K0	16 37 30.097	0.13	4	70.337	-61 46 06.00	0.13	4	70.337				13724
16161	-71	2060	9.1	G5	37 48.063	0.09	4	69.839	-71 44 54.61	0.13	4	69.839				19871
16162	-49	10890	5.91	B1p	37 52.653	0.11	6	69.222	-49 33 21.64	0.09	6	69.222	3321	22425	3729	33321
16163	-41	10796	8.0	K5	37 54.443	0.14	4	70.383	-41 57 53.50	0.21	4	70.383				1988
16164	-38	11128	8.9	G5	37 55.597	0.17	4	70.653	-38 37 43.30	0.11	4	70.653				13725
16165	-37	10917	8.8	F2	16 37 59.930	0.12	5	70.972	-37 58 56.47	0.20	5	70.972				13726
16166	-21	4399	8.9	K2	38 00.229	0.11	4	69.941	-21 34 27.05	0.07	4	69.941				13727
16167	-55	7650	8.8	K0	38 08.742	0.12	4	70.151	-55 27 46.16	0.11	4	70.151				13728
16168	-15	4369	8.4	F5	38 12.102	0.17	2	71.983	-15 15 40.31	0.05	2	71.983				13729
16169	-23	12890	8.6	K0	38 12.565	0.29	4	70.547	-23 13 42.83	0.13	4	70.547				13730
16170	-8	4287	6.59	K0	16 38 13.546	0.19	2	70.448	-8 12 50.29	0.34	2	70.448		22433		13731
16171	-56	7821	7.6	K5	38 18.344	0.08	4	70.078	-56 42 18.94	0.14	4	70.078				13732
16172	-53	8139	7.96	K2	38 21.648	0.06	4	70.115	-54 04 42.90	0.11	4	70.115		22437		13733
16173	-28	12293	8.5	B9	38 27.562	0.07	4	71.153	-28 29 27.93	0.13	4	71.153				13734
16174	-13	4476	8.5	K5	38 33.479	0.05	2	72.371	-13 17 58.52	0.28	2	72.371				13735
16175	-24	12765	6.08	A5	16 38 33.994	0.04	6	70.586	-24 22 21.90	0.07	6	70.586	3322	22447		13736
16176	-17	4618	5.04	K0	38 40.605	0.02	142	71.579	-17 38 49.52	0.03	141	71.572	624	22449	3732	80624
16177	-35	11079	8.8	K5	38 42.012	0.27	4	69.926	-35 31 53.78	0.08	4	69.926				13737
16178	+1	3286	6.64	K0	38 44.398	0.01	2	72.406	+1 20 26.79	0.45	2	72.406		22450		13738
16179	-36	10909	9.0	K2	38 47.523	0.11	4	69.966	-36 27 41.98	0.07	4	69.966				13739
16180	-34	11198	9.1	F8	16 38 51.718	0.17	3	69.702	-34 22 01.34	0.12	3	69.702				13740
16181	-30	13380	7.66	K0	38 54.705	0.06	4	70.841	-30 26 03.96	0.26	4	70.841		22451		13741
16182	-43	11022	8.0	K0	38 55.140	0.04	4	70.573	-44 00 54.93	0.11	4	70.573				1989
16183	+25	3115	6.22	K2	38 56.024	0.08	6	70.325	+24 57 14.06	0.07	6	70.325	3323	22452		33323
16184	-16	4328	8.7	K2	38 57.265	0.05	2	70.888	-16 16 07.52	0.23	2	70.888				13742
16185	+5	3254	6.75	A0	16 39 01.823	0.05	2	72.265	+4 58 01.09	0.08	2	72.265		22458	3733	13743
16186	-80	816	8.1	F0	39 06.223	0.10	4	70.562	-80 16 17.27	0.14	4	70.562				19872
16186	SP				39 06.205	0.21	4	69.630	-80 16 17.19	0.31	4	69.630				19872
16187	-24	12768	8.7	K0	39 06.433	0.04	5	70.695	-24 43 28.31	0.21	4	70.559				13744
16188	+1	3290	5.86	F0	39 10.230	0.16	6	71.039	+1 16 31.68	0.06	6	71.039	3324	22460		33324
16189	-19	4407	8.7	A2	16 39 19.268	0.14	4	70.637	-19 58 04.44	0.08	4	70.637				13745
16190	-40	10630	8.4	K2	39 23.064	0.15	3	70.099	-40 11 43.25	0.07	4	70.422				1990
16191	-48	11111	9.5	K0	39 23.868	0.16	4	71.480	-48 40 37.49	0.21	4	71.480				1991
16192	-68	2800	8.5	M1	39 24.627	0.08	4	68.816	-68 42 42.14	0.18	4	68.816				19873
16193	-6	4485	8.4	K5	39 25.792	0.21	3	71.075	-6 50 29.12	0.15	3	71.075				13746

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16194	-83°	609	8.9	F8	16 39 35.757	0.09	5	71.468	-83 38 16.44	0.15	5	71.468				19874
16194	SP				39 35.597	0.08	4	70.191	-83 38 16.15	0.26	4	70.191				19874
16195	+ 2	3155	8.2	A2	39 36.664	0.08	2	71.970	+ 2 21 59.75	0.17	2	71.970				13747
16196	+ 1	3294	8.8	F2	39 39.225	0.10	2	72.454	+ 1 33 42.73	0.17	2	72.454				13748
16197	-26	11484	8.1	K2	39 40.988	0.11	5	71.105	-27 05 36.91	0.08	5	71.105				13749
16198	-10	4373	7.6	A2	16 39 49.317	0.15	2	72.265	-11 04 50.41	--	1	72.233				13750
16199	-79	903	9.0	A2	39 51.096	0.07	4	71.202	-79 34 28.28	0.22	4	71.202				19875
16199	SP				39 51.092	0.05	4	70.212	-79 34 29.03	0.36	4	70.212				19875
16200	- 1	3237	8.8	K2	39 52.975	0.10	2	72.326	- 1 42 05.78	0.37	2	72.326				13751
16201	-47	10984	9.6	G5	39 53.297	0.18	4	70.403	-47 30 23.47	0.11	4	70.403				1992
16202	-31	13153	8.9	K0	16 39 56.418	0.09	4	70.765	-31 15 05.78	0.15	4	70.765				13752
16203	-21	4403	8.6	F8	40 03.170	0.05	4	70.396	-21 15 00.72	0.17	4	70.396				13753
16204	-60	6621	8.6	K0	40 08.251	0.10	4	68.914	-60 21 01.89	0.38	4	68.914				13754
16205	- 8	4294	8.2	F8	40 17.683	0.24	2	71.970	- 8 51 28.10	0.02	2	71.970	22477			13755
16206*	+ 0	3569	8.5	G0	40 18.562	0.12	3	71.806	+ 0 10 07.16	0.21	3	71.806				13756
16207	-84	528	8.0	K2	16 40 21.049	0.12	5	71.229	-84 55 23.30	0.09	4	71.227				19877
16207	SP				40 21.064	0.22	4	69.418	-84 55 23.88	0.29	4	69.418				19877
16208	-66	3005	8.3	G5	40 21.216	0.15	4	68.801	-66 24 16.12	0.06	4	68.801				19876
16209	-18	4310	8.6	K2	40 21.623	0.12	2	71.945	-18 21 54.53	0.14	2	71.945				13757
16210	-31	13161	6.55	B9	40 25.499	0.03	5	68.893	-32 00 46.26	0.09	5	68.893	3325	22482	3735	33325
16211	-49	10930	8.2	K2	16 40 30.250	0.12	4	70.350	-49 40 47.28	0.19	4	70.350				1993
16212	- 3	3982	7.3	K5	40 34.186	0.10	2	70.395	- 4 03 25.43	0.21	2	70.395				13758
16213	-36	10938	9.0	M0	40 37.819	0.12	4	70.999	-36 32 48.04	0.11	4	70.999				13759
16214	-20	4547	8.4	A0	40 40.181	0.13	4	69.465	-20 36 13.79	0.16	4	69.465				13760
16215	-43	11054	9.0	A0	40 41.183	0.12	4	70.723	-43 40 33.10	0.10	4	70.723				1994
16216	-52	10161	5.97	K0	16 40 42.003	0.13	6	70.010	-53 03 36.34	0.14	6	70.010	3327	22493		33327
16217	-14	4476	8.6	A5	40 48.086	0.06	2	70.992	-15 09 03.28	0.11	2	70.992				13761
16218	-46	10976	8.0	G5	40 52.950	0.12	5	70.657	-46 41 37.15	0.10	5	70.657				1995
16219	-18	4315	7.2	K0	41 09.908	0.05	2	69.963	-18 26 56.27	0.18	2	69.963				13762
16220	-40	10661	5.68	B3	41 14.380	0.06	6	69.946	-40 44 51.83	0.11	6	69.946	3329	22505	3737	33329
16221	-26	11509	8.6	K5	16 41 16.804	0.11	4	69.347	-26 13 58.46	0.09	4	69.347				13763
16222	-45	10890	8.0	A2	41 18.378	0.10	4	70.437	-46 01 20.90	0.27	4	70.437				1996
16223	- 2	4235	8.0	F5	41 20.089	0.08	2	70.406	- 2 32 19.42	0.11	2	70.406				13764
16224	-32	11972	8.7	K0	41 24.141	0.14	4	69.950	-32 23 22.68	0.10	4	69.950				13765
16225	+ 4	3242	8.3	K0	41 24.440	0.18	2	70.396	+ 4 06 41.94	0.05	2	70.396	22509			13766
16226	-38	11184	9.3	G5	16 41 25.828	0.15	4	70.959	-38 21 57.60	0.11	4	70.959				13767
16227	-42	11495	9.3	K0	41 26.357	0.04	3	71.321	-42 24 02.46	0.07	3	71.321				1997
16228	-50	10780	8.5	K5	41 36.700	0.14	4	69.832	-50 58 28.90	0.19	4	69.832				1998
16229	-51	10469	8.7	K2	41 39.328	0.09	4	69.476	-52 00 46.48	0.16	4	69.476				1999
16230	-30	13429	9.0	K2	41 42.281	0.15	4	69.360	-30 18 13.18	0.12	4	69.360				13768
16231	- 5	4344	8.3	G5	16 41 46.720	0.02	2	70.078	- 5 35 43.99	0.11	2	70.078				13769
16232	-86	333	6.13	A0	41 50.448	0.02	168	71.368	-86 16 55.65	0.03	165	71.373	921	22519	3739	60921
16232	SP				41 50.409	0.02	176	70.992	-86 16 55.78	0.04	172	70.984	921	22519	3739	70921
16233	-13	4495	7.9	M1	41 52.644	0.09	2	71.401	-13 59 19.48	0.17	2	71.401				13770
16234	-33	11415	9.0	K5	41 52.655	0.09	4	70.597	-33 22 32.39	0.30	3	70.031				13771
16235	-31	13184	8.1	K5	16 41 53.272	0.08	4	69.846	-31 17 19.06	0.08	4	69.846				13772
16236	-22	4205	6.89	F5	42 07.941	0.11	4	69.430	-23 05 34.06	0.06	4	69.430	22527			13773
16237	-34	11244	8.7	K2	42 10.185	0.09	4	70.694	-34 31 22.48	0.14	4	70.694				13774
16238	+ 2	3166	7.6	A2	42 11.309	0.03	2	70.444	+ 2 25 27.73	0.16	2	70.444	22528			13775
16239	-12	4587	8.5	K2	42 23.387	0.14	2	71.466	-12 24 21.88	0.11	2	71.466				13776
16240	-64	3559	8.9	K2	16 42 25.861	0.15	5	70.787	-64 16 27.17	0.26	5	70.787				19878
16241	-46	11008	6.74	A2	42 26.012	0.15	6	70.045	-46 26 28.86	0.11	6	70.045	3331	22534	3743	33331
16242	-39	10653	7.7	K5	42 28.715	0.20	4	70.573	-39 47 11.25	0.18	4	70.573				13777
16243	-54	7841	8.6	K2	42 29.544	0.10	4	70.599	-54 11 06.44	0.20	4	70.599				13778
16244	-65	3359	8.3	G5	42 34.113	0.18	4	70.161	-65 58 59.00	0.11	4	70.161				19879
16245	- 2	4242	7.25	M3	16 42 34.337	0.27	2	70.395	- 2 59 38.58	0.24	2	70.395	22537	3744		13779
16246	-18	4320	6.89	K5	42 34.530	0.04	2	71.949	-19 02 46.53	0.48	2	71.949	22538			13780
16247	- 0	3177	8.2	G5	42 39.053	0.20	2	71.927	- 0 54 15.49	0.17	2	71.927				13781
16248	-40	10691	8.3	K0	42 41.994	0.13	4	70.848	-41 07 50.98	0.27	4	70.848				2000
16249	-35	11095	8.9	K0	42 42.427	0.17	4	70.656	-35 32 55.10	0.10	4	70.656				13782
16250	-26	11533	6.85	A0	16 42 43.062	0.04	4	69.969	-26 33 31.75	0.14	4	69.969	22539			13783
16251	-82	693	9.0	K0	42 49.431	0.16	5	71.438	-82 25 33.34	0.12	5	71.438				19880
16251	SP				42 49.537	0.39	5	70.910	-82 25 33.44	0.19	4	71.114				19880
16252	-10	4384	8.3	K2	42 49.737	0.03	2	71.941	-10 49 59.48	0.24	2	71.941				13784
16253	-61	5778	8.6	K2	43 03.543	0.17	3	70.569	-62 03 37.59	0.02	3	70.569				13785
16254*	-56	7852	9.0	G0	16 43 05.941	0.14	5	71.232	-57 00 13.70	0.21	5	71.232				13786
16255	- 8	4305	8.7	F5	43 06.466	0.07	2	71.982	- 8 22 39.96	0.30	2	71.982				13787
16256	-16	4344	8.8	K5	43 12.395	0.18	2	71.501	-16 48 38.07	0.12	2	71.501				13788
16257	-68	2822	1.88	K2	43 21.023	0.03	73	71.050	-68 56 20.77	0.04	73	71.050	625	22558	3745	30625
16258	+ 8	3271	5.38	K2	43 25.702	0.10	6	69.697	+ 8 40 20.58	0.06	6	69.697	3332	22560	3746	33332
16259	-59	6828	8.7	G5	16 43 27.880	0.17	4	71.014	-59 48 37.87	0.22	4	71.014				13789
16260	-58	6899	8.8	K0	43 34.997	0.11	4	70.978	-58 08 31.41	0.06	4	70.978				13790
16261	-17	4631	8.2	G0	43 40.097	0.09	2	69.973	-17 30 17.98	0.16	2	69.973	22565			13791
16262	-44	11123	8.39	K5	43 45.408	0.11	4	69.733	-44 37 23.09	0.11	4	69.733	22568			2001
16263	-25	11667	6.57	K0	43 47.385	0.11	4	69.462	-25 26 21.42	0.20	4	69.462	22570			13792

16206 8.9m-9.9m, 0°2, 336°.

16254 9.7m-9.7m, 0°3, 39°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16264	-	1 3244	8.5	F8	16 43 49.248	0.31	2	70.410	- 1 16 14.32	0.43	2	70.410				13793
16265	-	69 2632	9.1	K5	43 51.438	0.07	4	71.263	-69 26 42.12	0.18	4	71.263				19881
16266	-	29 12836	8.0	K0	43 54.898	0.11	4	69.892	-29 30 16.52	0.08	4	69.892				13794
16267*	-	13 4504	8.2	A2	43 58.412	0.14	2	71.952	-13 14 58.72	0.09	2	71.952				13795
16268	-	19 4425	7.63	K0	44 00.133	0.12	4	69.961	-20 00 49.42	0.09	4	69.961				13796
16269	-	61 5784	7.31	K0	16 44 00.193	0.16	4	70.992	-61 24 03.49	0.17	4	70.992	22579	22580		13797
16270	+	2 3173	8.9	B8	44 15.680	0.29	2	72.082	+ 2 17 53.75	0.01	2	72.082				13798
16271	+	2 3174	6.74	F0	44 21.835	0.00	2	71.452	+ 2 19 51.67	0.26	2	71.452	22585	3748		13799
16272	-	2 4248	8.7	A0	44 27.442	0.30	2	72.079	- 3 00 31.20	0.13	2	72.079				13800
16273	-	55 7694	8.2	K	44 37.116	0.13	3	69.950	-55 20 45.60	0.06	3	69.950				13801
16274	+	2 3175	6.04	A2	16 44 38.329	0.02	91	71.539	+ 2 09 11.14	0.03	88	71.521	1436	22592	3749	81436
16275	-	5 4350	8.5	A0	44 43.408	0.11	2	72.073	- 6 08 12.16	0.08	2	72.073				13802
16276	-	23 12923	8.1	B8	44 44.638	0.07	6	70.776	-23 53 09.89	0.10	6	70.776				21141
16277	-	28 12412	7.8	F8	44 47.258	0.10	4	69.410	-28 52 09.12	0.22	4	69.410				13803
16278p	-	70 2310	9.2	G5	44 53.629	0.10	4	70.880	-71 04 48.26	0.07	4	70.880				19882
16279	-	52 10223	8.7	K2	16 44 53.646	0.05	5	71.301	-52 23 01.11	0.10	5	71.301				13804
16280	-	51 10512	9.0	K0	45 01.396	0.27	4	71.348	-51 13 14.35	0.17	4	71.348				2002
16281	-	24 12834	7.48	K5	45 11.178	0.14	4	70.257	-24 26 20.65	0.12	4	70.257	22599			13805
16282	-	20 4561	8.7	F8	45 14.671	0.08	4	70.645	-20 51 34.14	0.08	4	70.645	22601			13806
16283	+	5 3272	5.28	A0p	45 18.554	0.11	6	69.936	+ 5 20 05.30	0.13	6	69.936	3333	22605	3750	33333
16284	-	37 10995	7.8	K0	16 45 19.785	0.15	4	70.316	-37 59 11.45	0.06	4	70.316				13807
16285	-	77 1225	8.6	K2	45 23.862	0.20	4	69.830	-77 40 26.38	0.14	4	69.830				19883
16285 SP	+	1 3306	8.9	A3	45 23.779	0.18	4	70.227	-77 40 26.29	0.14	4	70.227				19883
16286	+	67 3224	8.3	K0	45 26.177	0.12	2	72.717	+ 1 18 02.68	0.14	2	72.717				13808
16287	-	58 6906	3.68	K5	45 27.378	0.14	4	70.265	-67 15 53.99	0.17	4	70.265				19884
16288	-	73 1759	6.96	A0	16 45 27.515	0.04	36	71.008	-58 57 16.91	0.04	36	71.008	1435	22606	3751	31435
16289	-	73 1759	6.96	A0	45 34.041	0.12	7	70.309	-73 38 13.46	0.11	6	70.152	3334	22607		33334
16290	-	14 4486	6.12	A0	45 33.986	0.09	21	71.740	-73 38 14.24	0.16	20	71.722	3334	22607		53334
16291	-	34 11276	9.3	G5	45 36.378	0.04	4	73.066	-14 49 19.67	0.14	4	73.066	3335	22608		13809
16292	-	27 11180	8.5	G0	45 39.931	0.06	4	70.399	-34 46 48.00	0.13	4	70.399				13810
16293	-	20 4563	8.3	K5	16 46 01.246	0.16	4	70.827	-27 29 04.40	0.15	4	70.827				13811
16294	-	56 7871	8.8	G5	46 04.033	0.14	4	70.551	-20 22 09.79	0.11	4	70.551				13812
16295	-	49 10992	7.8	K5	46 10.745	0.19	4	70.205	-56 35 03.28	0.02	4	70.205				13813
16296	-	22 4219	8.4	F2	46 10.783	0.09	4	69.916	-49 51 44.39	0.26	4	69.916				2003
16297	-	4 4165	7.26	G5	46 11.907	0.12	4	70.399	-22 37 30.37	0.12	4	70.399				13814
16298	-	9 4454	8.1	F0	16 46 12.657	0.28	2	70.395	- 4 25 42.45	0.41	2	70.395	22622	3753		13815
16299	-	40 10774	8.4	K5	46 12.759	0.17	2	72.785	- 9 50 07.90	0.44	2	72.785				13816
16300	-	8 4320	8.2	F5	46 15.020	0.12	4	70.576	-40 15 16.56	0.12	4	70.576				2004
16301	-	4 4168	8.5	K0	46 16.152	0.16	2	72.406	- 8 50 36.06	0.15	2	72.406				13817
16302	-	36 10991	7.7	K0	46 19.359	0.06	2	72.425	- 4 53 55.60	0.57	2	72.425				13818
16303	-	35 11127	9.1	F8	16 46 23.913	0.13	4	70.409	-36 19 12.62	0.10	4	70.409				13819
16304	-	16 4353	8.6	K0	46 27.847	0.20	3	70.986	-35 12 43.21	0.13	3	70.986				13820
16305	-	47 11083	9.0	K0	46 29.537	0.24	2	72.084	-16 41 09.91	0.25	2	72.084				13821
16306	-	21 4422	7.60	M0	46 30.403	0.22	4	70.963	-47 25 01.53	0.19	4	70.963				2005
16307	+	0 3583	8.5	K2	46 35.798	0.04	55	71.779	-21 45 58.71	0.04	54	71.749	1437	22629	3756	31437
16308	-	43 11154	9.23	G5	16 46 46.989	0.05	2	70.506	+ 0 00 29.22	0.02	2	70.506				13822
16309	-	18 4332	8.6	F5	46 49.300	0.07	4	71.027	-43 56 14.87	0.25	4	71.027	22635			2006
16310	-	34 11285	2.36	K0	46 52.640	0.04	2	70.463	-18 10 29.13	0.24	2	70.463				13823
16311	-	23 12931	8.3	K0	46 54.137	0.04	52	71.399	-34 12 20.97	0.05	50	71.385	628	22640	3757	30628
16312	-	65 3365	6.30	B8	46 58.183	0.06	4	71.208	-23 21 46.04	0.21	4	71.208				13824
16313	-	10 4394	4.73	F5	16 47 01.404	0.13	6	69.737	-65 17 27.71	0.19	6	69.737	3337	22641	3758	33337
16314	-	15 4397	8.6	G5	47 04.007	0.05	9	71.126	-10 41 48.27	0.10	9	71.126	1438	22643	3759	31438
16315	-	31 13282	7.8	G5	47 12.381	0.13	2	73.331	-15 20 28.46	0.11	2	73.331				13825
16316	-	1 3254	8.9	F5	47 26.860	0.11	4	70.602	-31 33 05.70	0.19	4	70.602				13826
16317	-	41 10949	8.7	K0	47 27.180	0.07	2	72.499	- 1 56 59.58	0.11	2	72.499				13827
16318	-	25 11721	8.2	K5	16 47 38.659	0.14	4	71.179	-41 29 01.14	0.10	4	71.179				2007
16319	-	7 4361	8.6	K5	47 39.464	0.08	4	71.427	-25 20 34.23	0.09	4	71.427				13828
16320	-	27 11207	8.3	K0	47 41.031	0.05	2	73.295	- 7 22 20.86	0.21	2	73.295				13829
16321	-	71 2086	7.6	K2	47 58.009	0.13	4	70.563	-27 53 44.44	0.04	4	70.563				13830
16322	-	30 13527	7.6	K0	47 58.785	0.21	4	70.075	-72 01 13.16	0.30	4	70.075				19885
16323	-	39 10772	8.6	K0	16 47 59.994	0.05	4	70.419	-30 35 17.56	0.11	4	70.419				13831
16324	-	42 11602	8.0	K5	48 06.134	0.07	4	71.407	-39 36 48.93	0.17	4	71.407				13832
16325	-	18 4336	7.7	K0	48 13.578	0.13	4	70.451	-42 32 00.63	0.18	4	70.451				2008
16326	+	4 3268	8.8	K5	48 14.367	0.26	3	72.545	-19 06 09.48	0.24	3	72.545				13833
16327	-	32 12084	8.9	K0	48 16.387	0.16	2	73.376	+ 4 32 09.07	0.08	2	73.376				13834
16328	-	13 4512	8.7	A0	16 48 19.911	0.12	4	71.469	-32 41 15.63	0.15	4	71.469				13835
16329	-	0 3195	8.6	A0	48 27.011	0.30	3	73.122	-13 30 48.76	0.24	2	72.975				13836
16330	-	50 10863	8.5	K2	48 27.708	0.20	2	72.946	- 0 22 58.11	0.14	2	72.946				13837
16331	-	37 11033	3.0v	B3p	48 28.642	0.12	4	69.825	-50 50 16.41	0.09	4	69.825				2009
16332	-	35 11146	8.6	K5	48 28.655	0.05	36	71.370	-37 57 49.26	0.05	36	71.370	1439	22677	3763	31439
16333	-	3 4011	8.2	K0	16 48 30.211	0.08	4	70.810	-35 39 30.52	0.17	4	70.810				13838
16334	+	5 3283	8.46	K2	48 30.463	0.04	2	72.296	- 3 10 13.61	0.01	2	72.296				13839
16335	-	12 4604	8.5	K2	48 35.678	0.03	2	72.766	+ 4 52 03.17	0.36	2	72.766	22680			13840
16336	+	30 2884	5.86	K5	48 37.081	0.07	2	70.454	-12 36 57.09	0.31	2	70.454				13841
					48 41.729	0.06	6	70.176	+29 53 26.16	0.29	6	70.176	3339	22682	3764	33339

16267 8.2m-9.4m, 0°3, 52°.

16278 11.0m, 8°0, 175°.

16331 3.0m to 3.3m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
16337	-58	6919	8.6	K0	16 48 46.745	0.06	4	70.024	-58 22 31.32	0.20	4	70.024				13842
16338	-37	11037	3.64	B2	48 56.582	0.09	6	71.509	-37 56 03.93	0.12	6	71.509		22691		21142
16339	+3	3289	8.8	A0	48 57.085	0.01	2	70.457	+3 16 00.98	0.19	2	70.457				13843
16340	-22	4232	8.0	F0	49 01.502	0.05	5	70.733	-22 49 33.74	0.09	4	70.606				13844
16341	-84	531	7.8	M1	49 05.325	0.06	4	69.828	-84 13 35.55	0.14	4	69.828				19886
16341	SP				16 49 05.220	0.11	4	69.807	-84 13 35.27	0.24	4	69.807				19886
16342	-72	2000	8.2	G0	49 06.865	0.09	4	69.476	-73 02 02.65	0.19	4	69.476				19887
16343	-38	11275	8.8	F2	49 16.787	0.04	4	70.368	-38 40 39.53	0.18	4	70.368				13845
16344	-14	4494	8.4	K2	49 24.895	0.11	2	70.401	-14 17 15.02	0.09	2	70.401				13846
16345	-57	8156	8.7	G5	49 33.599	0.12	4	70.232	-57 51 30.05	0.15	4	70.232				13847
16346	-5	4364	7.8	K0	16 49 35.038	0.16	2	71.919	-5 42 21.30	0.26	2	71.919				13848
16347	+24	3069	5.20	K0	49 40.794	0.07	18	70.841	+24 44 21.31	0.09	18	70.841	1440	22708	3765	81440
16348	-54	7887	7.65	K0	49 47.316	0.22	4	70.687	-54 16 53.58	0.19	4	70.687				13849
16349	+15	3066	6.41	A0p	49 48.147	0.13	8	70.048	+15 03 24.22	0.18	6	69.422	629	22714	3766	30629
16350	-26	11634	8.1	K0	49 50.093	0.09	4	69.819	-26 40 06.74	0.17	4	69.819				13850
16351	-33	11523	9.0	G5	16 49 51.075	0.06	4	70.017	-33 18 02.26	0.15	4	70.017				13851
16352	-29	12956	8.5	K0	50 04.451	0.11	4	69.893	-29 53 59.00	0.10	4	69.893				13852
16353	-71	2092	8.3	G5	50 17.654	0.14	5	70.422	-71 12 50.21	0.10	5	70.422				19888
16354	-74	1579	8.6	K0	50 19.164	0.10	4	69.473	-74 33 58.75	0.17	4	69.473				19889
16355	-59	6857	8.0	K5	50 21.819	0.12	3	70.323	-59 38 35.75	0.27	4	70.588				13853
16356	-46	11093	9.5	K5	16 50 26.017	0.08	4	69.925	-46 24 24.15	0.16	4	69.925				2010
16357	+18	3261	6.87	F5	50 28.171	0.09	6	69.622	+18 08 39.07	0.11	6	69.622	3340	22732	3768	33340
16358	+3	3298	8.4	G5	50 44.479	0.14	2	69.940	+3 06 07.74	0.01	2	69.940				13854
16359	-11	4227	8.3	A0	50 46.855	0.24	2	69.947	-11 40 06.77	0.00	2	69.947				13855
16360	-62	5463	8.9	K0	50 51.394	0.04	4	70.137	-62 14 12.69	0.16	4	70.137				13856
16361	-55	7736	7.56	K0	16 50 52.439	0.24	4	69.441	-55 58 03.45	0.01	4	69.441		22745		13857
16362	-3	4020	8.3	F0	50 53.993	0.29	2	71.466	-3 26 09.37	0.09	2	71.466				13858
16363	-24	12916	8.4	B8	50 54.052	0.06	4	69.816	-24 59 18.23	0.16	4	69.816				13859
16364	-0	3197	7.4	F8	50 54.203	0.10	2	70.987	-1 02 56.99	0.16	2	70.987				13860
16365	-17	4646	7.7	K0	51 02.486	0.01	2	70.493	-17 53 43.86	0.08	2	70.493			3771	13861
16366	-45	11050	8.8	K0	16 51 03.393	0.04	4	70.305	-46 00 34.38	0.05	4	70.305				2011
16367	-8	4346	8.3	K0	51 03.731	0.07	2	70.394	-8 53 21.88	0.08	2	70.394				13862
16368	-47	11124	8.5	M0	51 10.428	0.10	4	69.961	-48 01 22.40	0.22	4	69.961				2012
16369	-30	13588	8.09	K0	51 15.281	0.10	4	69.438	-30 38 21.17	0.05	4	69.438		22757		13863
16370	-79	910	9.1	M	51 17.970	0.03	4	69.766	-80 00 32.27	0.16	4	69.766				19890
16370	SP				16 51 17.997	0.13	4	69.664	-80 00 32.02	0.09	4	69.664				19890
16371	-36	11054	7.9	K0	51 18.311	0.12	4	69.929	-36 08 41.51	0.17	4	69.929				13864
16372	-44	11261	8.82	G5	51 18.490	0.09	4	69.969	-44 59 44.27	0.20	4	69.969				2013
16373	-70	2326	6.65	A2	51 20.425	0.08	6	69.601	-71 01 56.86	0.10	6	69.601	3341	22762		33341
16373	SP				51 20.386	0.11	23	71.627	-71 01 57.20	0.19	22	71.623	3341	22763		53341
16374	-44	11264	8.8	K0	16 51 24.353	0.07	4	70.448	-44 28 43.35	0.14	4	70.448				1953
16375	-85	453	8.6	A2	51 30.203	0.10	4	70.319	-86 07 58.94	0.23	4	70.319				19891
16375	SP				51 29.940	0.07	4	69.557	-86 07 58.00	0.18	4	69.557				19891
16376	+1	3335	8.7	K0	51 34.142	0.04	2	70.410	+1 12 39.48	0.15	2	70.410				13865
16377	-6	4513	8.0	K5	51 36.670	0.05	2	71.925	-6 37 53.38	0.43	2	71.925				13866
16378	+2	3198	8.7	K0	16 51 37.383	0.07	2	71.921	+1 56 03.02	0.23	2	71.921				13867
16379	+10	3092	4.29	B8	51 38.314	0.04	39	71.096	+10 14 45.76	0.05	38	71.057	1442	22775	3775	31442
16380	-21	4443	8.2	B5	51 38.948	0.18	4	69.475	-21 47 57.81	0.25	4	69.475				13868
16381	-12	4614	8.6	K0	51 44.963	0.04	2	70.478	-13 03 01.35	0.07	2	70.478				13869
16382	-3	4023	7.64	G5	51 48.524	0.19	2	71.932	-4 05 01.69	0.01	2	71.932		22777		13870
16383	-63	4034	8.8	G6	16 51 48.642	0.23	4	68.851	-63 48 17.30	0.19	4	68.851				13871
16384	-38	11317	9.0	K0	51 50.758	0.20	4	71.288	-38 43 07.06	0.09	4	71.288				13872
16385	-47	11134	9.0	K0	51 52.348	0.04	3	70.269	-47 22 42.29	0.25	3	70.269				2014
16386	-20	4579	8.5	K0	51 53.865	0.12	4	69.476	-20 42 50.60	0.10	4	69.476				13873
16387	-5	4374	5.35	K0	51 55.106	0.13	6	70.045	-5 04 25.69	0.13	6	70.045	3342	22783	3776	33342
16388	-32	12146	7.8v	K2	16 52 00.615	0.12	4	70.379	-32 33 03.71	0.09	4	70.379				13874
16389	-5	4375	8.8	K0	52 02.769	0.09	2	70.439	-5 37 49.58	0.15	2	70.439				13875
16390	-81	776	8.8	K5	52 22.235	0.06	4	70.926	-81 21 32.61	0.18	4	70.926				19892
16390	SP				52 22.306	0.08	4	70.186	-81 21 32.33	0.25	4	70.186				19892
16391	-29	13005	7.5	K0	52 22.706	0.15	4	69.800	-29 11 51.39	0.11	4	69.800				13876
16392f	-60	6673	8.3	G5	16 52 23.015	0.16	4	69.712	-60 52 44.08	0.17	4	69.712				13877
16393	+3	3301	8.3	K0	52 23.451	0.16	2	71.433	+3 44 41.42	0.51	2	71.433				13878
16394	-8	4348	8.0	K2	52 27.560	0.17	2	70.972	-8 17 20.78	0.17	2	70.972				13879
16395	-32	12156	9.1	F5	52 29.383	0.11	4	70.026	-33 03 16.51	0.09	4	70.026				13880
16396	-36	11070	9.2	K1	52 33.016	0.09	4	71.184	-37 01 11.14	0.19	4	71.184				13881
16397	-25	11789	7.40	B8	16 52 40.040	0.12	4	69.956	-25 27 18.32	0.03	4	69.956		22800		13882
16398	+21	3002	5.48	K0	52 45.847	0.10	8	70.045	+21 02 15.80	0.09	7	69.872	3343	22802		33343
16399	-68	2848	7.8	K2	52 45.849	0.17	4	69.904	-68 22 55.29	0.08	4	69.904				19893
16400	-23	12977	8.9	F0	52 46.479	0.16	4	69.986	-23 56 43.76	0.17	4	69.986				13883
16401	-11	4237	8.5	K0	52 47.070	0.04	2	71.909	-11 16 13.22	0.22	2	71.909				13884
16402	+0	3597	8.4	K2	16 52 51.229	0.02	2	70.902	+0 10 20.95	0.31	2	70.902				13885
16403	-39	10897	8.9	G5	52 58.100	0.06	4	71.400	-39 30 05.36	0.04	4	71.400				13886
16404	-35	11196	8.8	A0	52 58.855	0.09	4	70.978	-35 24 16.44	0.13	4	70.978				13887
16405	-2	4275	8.1	K0	52 59.157	0.13	2	69.937	-2 22 29.57	0.02	2	69.937				13888
16406	-33	11578	9.1	K0	53 00.194	0.17	4	71.020	-34 01 20.36	0.19	4	71.020				13889

16388 7.8m to 8.1m.

16392 SDS, 9.7m, 8.8, 270°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
16407	-43	11243	8.5	A3	16 53 03.866	0.03	3	70.044	-43 52 10.76	0.12	3	70.044				2015
16408	-31	13376	9.0	K0	53 07.101	0.13	5	70.286	-31 18 11.58	0.14	4	70.048				13890
16409	-5	4378	7.50	K0	53 08.464	0.06	2	70.071	-6 02 40.48	0.02	2	70.071		22814		13892
16410	-16	4371	6.49	K0	53 08.557	0.14	2	69.955	-16 43 40.95	0.03	2	69.955		22815		13891
16411	-0	3203	8.9	G5	53 18.389	0.08	2	71.466	-1 04 27.18	0.20	2	71.466				13893
16412	-66	3043	8.4	G5	16 53 24.571	0.05	4	70.697	-66 58 04.56	0.21	4	70.697				19894
16413	-15	4409	9.0	K5	53 24.717	0.10	2	70.403	-15 16 46.36	0.22	2	70.403				13894
16414	-53	8238	8.6	K2	53 38.012	0.11	4	70.356	-53 12 16.23	0.14	4	70.356				13895
16415	-49	11077	9.4	K2	53 40.477	0.08	4	70.758	-49 37 53.02	0.04	4	70.758				2016
16416	-58	6944	8.30	K0	53 42.044	0.07	4	70.649	-58 33 17.70	0.18	3	70.780		22821		13896
16417	-26	11696	8.6	A0	16 53 51.647	0.10	4	70.011	-26 52 26.95	0.21	4	70.011				13897
16418	-53	8241	8.0	F5	53 51.791	0.08	4	70.772	-53 45 49.61	0.10	4	70.772				13898
16419	-22	4250	8.7	K5	53 59.321	0.07	4	69.034	-22 29 57.94	0.13	4	69.034				13899
16420	-76	1186	7.00	F8	53 59.494	0.07	16	71.137	-76 08 32.48	0.11	15	71.130	1443	22832	3779	31443
16420	SP				53 59.494	0.08	30	71.049	-76 08 32.68	0.11	29	71.060	1443	22832	3779	51443
16421	-51	10608	8.2	K2	16 54 03.136	0.12	4	70.368	-51 08 00.72	0.23	4	70.368				2017
16422	-76	1187	8.7	K2	54 08.987	0.15	5	71.443	-76 18 51.39	0.16	4	71.492				19895
16422	SP				54 09.004	0.16	4	70.391	-76 18 51.34	0.33	4	70.391				19895
16423	-17	4667	8.8	G0	54 13.918	0.18	2	70.446	-17 44 27.91	0.23	2	70.446				13900
16424	-1	3271	8.6	F8	54 17.674	0.30	2	70.444	-1 58 18.34	0.04	2	70.444				13901
16425	-50	10924	5.70	B9	16 54 25.933	0.02	90	71.354	-50 33 52.38	0.03	90	71.354	1444	22841	3783	31444
16426	-55	7766	3.06	K5	54 28.368	0.05	12	70.314	-55 54 49.44	0.10	12	70.314	631	22845	3785	30631
16427	-45	11099	8.5	K0	54 33.917	0.10	4	71.010	-45 39 17.96	0.15	4	71.010				2018
16428	-40	11017	7.33	K2	54 38.151	0.19	4	71.377	-40 16 35.07	0.10	4	71.377		22846		2019
16429	-42	11711	8.5	A0	54 49.915	0.16	4	71.064	-42 55 43.85	0.10	4	71.064				2020
16430	-31	13412	8.6	K0	16 54 52.112	0.14	4	71.665	-31 59 29.54	0.07	4	71.665				13902
16431	-75	1338	8.9	K0	54 56.354	0.18	4	70.239	-75 54 59.93	0.13	4	70.239				19896
16431	SP				54 56.279	0.17	5	70.358	-75 54 59.76	0.69	3	69.994				19896
16432	-19	4474	8.3	M3	54 56.623	0.16	2	72.000	-19 42 54.95	0.18	2	72.000				13903
16433	-35	11214	8.8	K5	55 00.316	0.19	4	71.453	-35 36 46.07	0.23	4	71.453				13904
16434	-2	4283	7.32	A2	16 55 01.310	0.11	2	69.984	-2 56 25.09	0.11	2	69.984		22856		13905
16435	-52	10364	7.9	K0	55 11.253	0.03	4	71.224	-52 56 53.53	0.08	4	71.224				13906
16436	+10	3099	8.9	G0	55 11.448	-	1	69.625	+10 17 12.54	-	1	69.625				27212
16437	-25	11829	7.43	K2	55 11.494	0.03	4	68.923	-25 58 59.27	0.05	4	68.923		22860	3788	13907
16438	+14	3155	6.51	G5	55 14.347	0.15	6	71.258	+13 57 35.45	0.28	6	71.258	3346	22861	3789	33346
16439	+9	3298	3.42	K0	16 55 17.543	0.09	12	71.262	+9 27 04.41	0.06	12	71.262	633	22862	3790	30633
16440	-14	4507	7.27	K2	55 19.309	0.09	2	72.091	-14 17 47.26	0.19	2	72.091		22864		13908
16441	-50	10935	8.9	G5	55 26.407	0.11	4	72.278	-51 05 18.53	0.24	5	71.740				2021
16442	-10	4418	8.0	K0	55 26.528	0.21	2	71.925	-10 28 11.42	0.17	2	71.925				13909
16443	-64	3587	8.1	K5	55 28.297	0.11	4	71.226	-64 30 30.07	0.09	4	71.226				19897
16444	-46	11142	9.0	G5	16 55 28.713	0.04	4	71.133	-46 52 30.24	0.09	4	71.133				2022
16445	-38	11392	7.3	K0	55 29.009	0.15	4	70.823	-39 05 35.35	0.11	4	70.823				13910
16446	-52	10372	4.15	K2	55 35.455	0.04	38	70.948	-53 05 08.58	0.04	38	70.948	632	22869	3791	30632
16447	+24	3095	6.36	K0	55 37.704	0.12	7	70.981	+24 27 26.49	0.10	6	70.935	3347	22870	3792	33347
16448	-23	13012	8.5	A5	55 44.740	0.14	4	68.981	-23 54 40.71	0.24	4	68.981				13911
16449	-9	4472	8.5	F8	16 55 48.638	0.07	2	72.885	-9 39 03.36	0.13	2	72.885				13912
16450	-37	11135	8.8	K2	55 50.670	0.16	4	70.978	-37 29 49.97	0.11	4	70.978				13913
16451	-14	4509	6.47	F2	55 50.761	0.14	4	71.601	-14 47 39.32	0.14	4	71.601	3348	22875	3794	13914
16452	-66	3049	7.8	K2	55 58.816	0.12	4	70.739	-66 26 14.75	0.09	4	70.739				19898
16453	+1	3354	8.7	K0	56 05.923	0.01	2	72.810	+1 44 13.38	0.18	2	72.810				13915
16454	-54	7949	8.2	K5	16 56 07.782	0.09	4	70.669	-55 01 54.10	0.16	4	70.669				13916
16455	-8	4366	8.8	A0	56 11.048	0.10	2	72.499	-8 32 43.56	0.18	2	72.499				13917
16456	+4	3299	8.7	K0	56 15.350	0.01	2	72.551	+3 57 17.53	0.25	2	72.551				13918
16457	-41	11149	8.0	K5	56 16.245	0.12	4	69.955	-41 33 09.39	0.13	4	69.955				2023
16458	-69	2673	7.9	K0	56 24.869	0.12	4	71.078	-69 20 12.61	0.12	4	71.078				19899
16459	-15	4421	7.86	K5	16 56 30.987	0.01	2	72.003	-15 59 23.21	0.25	2	72.003		22891		13919
16460	-65	3387	8.2	F2	56 33.814	0.18	4	71.331	-65 16 26.27	0.12	4	71.331				19900
16461	-44	11339	6.56	A5	56 36.203	0.10	6	70.357	-44 54 51.72	0.15	6	70.357	3350	22893		33350
16462	-78	11121	8.5	K5	56 36.361	0.08	4	70.379	-78 24 06.95	0.16	4	70.379				19901
16462	SP				56 36.332	0.24	4	70.162	-78 24 07.22	0.33	4	70.162				19901
16463	-52	10385	8.9	K0	16 56 37.401	0.13	4	70.284	-52 34 13.42	0.08	4	70.284				13920
16464	-56	7938	8.0	M1	56 44.785	0.17	4	70.644	-56 24 23.21	0.12	4	70.644				13921
16465	-1	3278	7.5	F2	56 45.814	0.29	2	70.470	-1 36 47.67	0.23	2	70.470				13922
16466	+3	3316	8.5	K0	56 47.328	0.40	2	69.989	+2 58 59.32	0.30	2	69.989				13923
16467	-47	11192	9.0	G5	56 47.804	0.12	4	70.277	-48 06 00.06	0.14	4	70.354				2024
16468	-63	4048	8.8	K0	16 56 50.138	0.12	4	70.757	-63 11 29.68	0.06	4	70.757				13924
16469	-59	6882	8.5	F5	56 58.024	0.07	4	69.735	-59 41 13.30	0.12	4	69.735				13925
16470	-53	8291	8.4	K0	57 05.311	0.11	5	71.180	-53 54 26.40	0.12	5	71.180				13926
16471	-3	4040	7.68	K2	57 10.896	0.06	2	71.474	-3 48 50.65	0.45	2	71.474		22909		13927
16472	-16	4389	8.6	K2	57 15.071	0.11	2	70.398	-16 34 16.99	0.09	2	70.398				13928
16473	-17	4677	8.8	F2	16 57 19.563	0.21	2	70.526	-18 08 26.35	0.34	2	70.526		22913		13929
16474	-18	4376	8.3	K5	57 22.737	0.01	2	70.401	-19 05 42.32	0.16	2	70.401				13930
16475	-21	4478	7.39	K0	57 30.661	0.09	4	69.031	-21 23 15.89	0.09	4	69.031		22917		13931
16476	-29	13106	7.6	M3	57 50.982	0.08	4	69.865	-29 35 55.40	0.17	4	69.865				13932
16477	-36	11139	9.0	K0	57 51.869	0.14	4	69.946	-36 38 12.21	0.11	4	69.946				13933

16441 9.2m-10.2m, 0°3, 291°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16478	- 0	3208	9.0	F2	16 57 52.383	0.04	2	71.990	- 0 42' 25.22	0.00	2	71.990				13934
16479	-28	12708	7.60	K0	57 54.480	0.10	5	70.403	-28 28 49.11	0.03	4	70.194		22925		13935
16480	-70	2342	8.5	F2	58 02.393	0.13	4	70.435	-70 13 42.89	0.06	4	70.435				19902
16481	+ 6	3332	6.38	A5	58 03.005	0.09	6	68.881	+ 6 39 24.98	0.10	6	68.881	3352	22927		33352
16482	-53	8306	8.0	K0	58 03.683	0.09	4	69.463	-54 04 47.37	0.10	4	69.463				13936
16483	-38	11437	9.0	K0	16 58 10.137	0.07	4	70.429	-38 22 08.84	0.11	4	70.429				13937
16484p	-49	11122	9.2	K0	58 11.681	0.19	4	70.253	-50 06 31.55	0.05	4	70.253				2025
16485	-51	10649	8.5	K0	58 20.887	0.12	4	70.590	-51 37 33.81	0.15	4	70.590				2026
16486	-13	4528	6.93	G0	58 21.492	0.01	2	70.790	-13 29 31.75	0.22	2	70.790		22934		13938
16487	- 4	4215	5.00	K0	58 25.178	0.02	158	71.456	- 4 08 58.79	0.03	153	71.468	1445	22937	3801	81445
16488	-32	12269	8.1	G5	16 58 28.957	0.09	4	70.637	-32 21 49.59	0.13	4	70.637				13939
16489	- 6	4538	7.5	K2	58 31.837	0.19	2	72.012	- 6 57 21.40	0.20	2	72.012				13940
16490	+ 2	3226	8.5	F2	58 34.877	0.06	2	72.303	+ 2 37 29.11	0.07	2	72.303				13941
16491	-31	13473	5.06	B8	58 38.365	0.10	7	70.036	-32 04 16.86	0.17	6	69.833	3354	22942	3802	33354
16492	-42	11761	8.5	K2	58 40.380	0.16	4	70.370	-42 33 23.29	0.13	4	70.370				2027
16493	- 9	4478	8.6	A3	16 58 41.678	0.01	2	72.022	- 9 40 28.40	0.08	2	72.022				13942
16494	-62	5480	7.9	K5	58 41.941	0.14	4	70.127	-62 30 09.90	0.10	4	70.127				13943
16495	-44	11364	8.18	K0	58 42.052	0.08	4	70.407	-44 50 35.19	0.13	4	70.407		22944		2028
16496	-40	11083	9.0	F5	58 46.100	0.18	4	71.068	-40 54 29.56	0.23	4	71.068				2029
16497	-46	11178	8.5	G0	58 47.772	0.24	3	70.696	-46 30 49.31	0.09	3	70.696				2031
16498	-30	13716	8.3	K0	16 58 56.308	0.11	4	70.707	-30 34 49.68	0.19	4	70.707				13944
16499	-20	4612	7.8	K0	59 04.192	0.09	4	70.017	-20 31 26.24	0.20	4	70.017				13945
16500	-33	11667	8.2	K0	59 07.093	0.10	4	70.888	-33 26 41.50	0.09	4	70.888				13946
16501	-61	5829	8.3	K2	59 07.835	0.04	4	69.936	-61 52 47.69	0.15	4	69.936				13947
16502	-47	11215	9.0	F5	59 13.675	0.11	4	71.088	-47 17 35.76	0.11	4	71.088				2030
16503	-43	11349	8.9	G8	16 59 25.069	0.09	4	70.935	-43 46 34.14	0.18	4	70.935				2032
16504	-57	8260	9.0	K0	59 42.035	0.12	4	70.039	-57 29 34.85	0.18	4	70.039				13948
16505	-12	4646	8.6	F8	59 54.973	0.01	2	70.588	-12 28 53.25	0.42	2	70.588				13949
16506	-26	11830	7.7	K0	59 57.649	0.11	7	71.022	-27 01 39.05	0.11	6	70.985				13950
16507	- 5	4393	8.9	K0	59 57.899	0.06	2	70.764	- 5 36 48.89	0.14	2	70.764				13951
16508	-60	6692	8.2	K5	17 00 04.470	0.15	4	69.407	-60 48 04.71	0.13	4	69.407				13952
15509	-57	8265	5.88	B3	00 08.654	0.08	6	69.991	-57 38 33.22	0.13	6	69.991	3355	22983	3805	33355
16510	-24	13043	8.2	K5	00 14.670	0.10	4	70.449	-24 55 32.41	0.09	4	70.449				13953
16511	+25	3183	5.95	K0	00 15.670	0.11	6	70.037	+25 34 31.17	0.23	6	70.037	3356	22985		33356
16512	- 6	4542	7.2	A3	00 16.765	0.29	2	72.076	- 6 16 56.15	0.54	2	72.076				13954
16513	-34	11430	8.8	K5	17 00 17.555	0.20	4	70.330	-34 30 15.11	0.08	4	70.330				13955
16514*	-32	12293	8.7	G0	00 18.123	0.16	4	71.214	-32 37 38.62	0.16	3	71.398				13956
16515	-22	4269	7.3	K5	00 20.186	0.07	4	69.472	-23 04 53.68	0.25	4	69.472				13957
16516	-19	4499	8.2	K0	00 22.674	0.15	2	71.952	-19 25 20.05	0.12	2	71.952		22989		13958
16517	+ 0	3622	8.8	K2	00 29.154	0.15	2	72.099	+ 0 19 24.89	0.83	2	72.099				13959
16518	- 8	4380	8.7	G5	17 00 29.541	0.21	2	71.966	- 8 56 51.88	0.35	2	71.966				13960
16519	+ 4	3317	8.4	M0	00 32.284	0.12	2	71.998	+ 4 49 03.67	0.05	2	71.998				13961
16520	-35	11278	7.9	K0	00 35.270	0.12	4	70.424	-35 12 15.64	0.24	4	70.424				13962
16521	-45	11176	7.36	K0	00 36.549	0.15	4	70.371	-45 10 17.19	0.25	4	70.371		22997		2033
16522	-38	11490	7.9	M0	00 38.889	0.11	4	70.268	-39 00 08.38	0.14	4	70.268				13963
16523	-21	4494	8.7	K0	17 00 43.141	0.07	4	69.941	-21 20 37.23	0.18	4	69.941				13964
16524	-69	2682	8.8	K0	00 53.537	0.21	4	69.904	-69 35 10.53	0.12	4	69.904				19903
16525	-66	3058	9.0	K5	00 59.851	0.15	4	69.913	-66 38 47.94	0.11	4	69.913				19904
16526	-14	4528	9.2	G0	01 01.811	0.05	2	70.814	-14 12 50.36	0.16	2	70.814				13965
16527p	-57	8272	7.9	M0	01 05.877	0.07	4	69.343	-58 00 30.33	0.18	4	69.343				13966
16528	+ 0	3624	6.76	A2	17 01 07.578	0.14	2	71.496	- 0 04 35.70	0.37	2	71.496		23009	3807	13967
16529	-15	4439	8.8	G5	01 10.858	0.14	2	72.015	-16 07 25.28	0.10	2	72.015				13968
16530	-56	7985	8.9	G5	01 24.501	0.10	4	70.431	-57 00 54.54	0.25	4	70.431				13970
16531	- 2	4294	7.8	K5	01 24.503	0.16	2	72.025	- 2 30 53.97	0.46	2	72.025				13969
16532	-33	11706	4.87	B1p	01 31.730	0.09	6	70.799	-34 03 16.77	0.16	6	70.799		23019	3808	21143
16533	-62	5488	8.5	K0	17 01 33.956	0.12	5	71.475	-62 14 21.95	0.14	5	71.475				13971
16534	-17	4700	7.16	G5	01 35.180	0.02	2	71.602	-17 25 22.11	0.16	2	71.602		23021		13972
16535*	-41	11243	8.5	F8	01 42.428	0.17	4	70.687	-41 09 49.96	0.14	4	70.687				2034
16536	-31	13533	8.3	G5	01 43.094	0.10	4	70.250	-31 18 16.02	0.15	4	70.250				13973
16537	-60	6695	7.19	K2	01 44.060	0.08	4	70.936	-60 21 12.06	0.26	4	70.936		23031		13974
16538	-10	4436	7.08	K0	17 01 46.936	0.10	3	71.201	-11 01 11.76	0.18	3	71.201		23033		13975
16539	-20	4627	6.17	B3	01 47.365	0.06	4	69.857	-20 25 34.65	0.07	4	69.857		23034		13976
16540	- 7	4392	8.1	A0	01 48.320	0.20	2	72.766	- 7 38 09.83	0.22	2	72.766				13977
16541	-29	13175	8.5	K0	01 53.407	0.05	4	70.288	-29 39 08.32	0.10	4	70.288				13978
16542	-15	4445	8.8	K5	02 11.722	0.32	2	70.529	-15 11 57.09	0.05	2	70.529				13979
16543	-25	11935	8.37	F0	17 02 17.999	0.06	4	70.245	-25 24 35.64	0.07	4	70.245		23040		13980
16544	-52	10439	8.6	K2	02 23.158	0.11	4	70.120	-52 09 54.35	0.13	4	70.120				13981
16545	+ 3	3335	8.22	A0	02 23.624	0.01	2	72.106	+ 3 50 21.73	0.12	2	72.106				13982
16546	- 4	4225	7.90	KSp	02 25.588	0.37	2	72.099	- 4 59 23.80	0.01	2	72.099		23043	3809	13983
16547	-38	11533	8.8	G5	02 31.221	0.12	4	70.725	-38 25 30.81	0.16	4	70.725				13984
16548	- 9	4490	8.7	K5	17 02 34.991	0.06	2	72.066	- 9 33 46.12	0.66	2	72.066				13985
16549	+ 0	3629	5.94	G0	02 43.889	0.16	2	72.725	+ 0 46 20.77	0.31	2	72.725		23050		13986
16550	-74	1599	7.43	K0	02 49.460	0.12	4	69.361	-74 59 56.85	0.10	4	69.361		23054		19905
16550 SP					02 49.430	0.25	4	68.677	-74 59 56.89	0.20	4	68.677		23054		19905
16551	-17	4705	8.3	B8	02 53.402	0.04	2	72.777	-18 02 57.09	0.04	2	72.777				13987

16484 SDS, 10.2m, 4°3, 53°.

16514 SDS, 9.2m-10.1m, 0°3, 290°.

16527 11.0m, 5°9, 76°.

16535 9.2m-9.2m, 0°3, 244°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
16552	- 0	3224	5.62	B3	17 02 57.491	0.09	6	70.033	- 0 49 30.07	0.18	6	70.033	3357	23058	3810	33357
16553	+ 3	3339	8.9	G5	03 01.314	0.10	2	72.807	+ 2 54 01.30	0.03	2	72.807				13988
16554	+12	3142	4.91	A3	03 03.516	0.04	7	71.275	+12 48 28.74	0.08	7	71.275	635	23061	3811	30635
16555	-11	4293	8.8	A2	03 05.683	0.12	2	72.886	-11 14 27.47	0.22	2	72.886				13989
16556	-59	6903	7.48	K2	03 05.896	0.22	4	69.613	-59 36 04.00	0.22	4	69.613		23062		13990
16557	-21	4512	6.29	A0	17 03 12.436	0.08	6	70.233	-21 29 50.88	0.11	6	70.233	3358	23065	3812	13991
16558	-30	13788	9.0	G5	03 12.805	0.08	4	70.432	-30 40 03.38	0.05	4	70.432				13992
16559	-55	7874	8.7	G5	03 17.213	0.11	3	70.342	-55 39 05.48	0.05	3	70.342				13993
16560	-50	11009	8.2	K0	03 24.563	0.13	4	70.449	-50 56 08.10	0.07	4	70.449				2035
16561	- 5	4401	8.6	K0	03 27.625	0.04	2	71.971	- 6 06 01.31	0.11	2	71.971		23069		13994
16562	-12	4662	7.84	F2	17 03 34.075	0.04	2	70.448	-12 20 42.38	0.23	2	70.448		23075		13995
16563	-36	11236	8.3	K2	03 34.707	0.17	4	70.462	-36 39 15.30	0.09	4	70.462				13996
16564	-32	12347	9.2	A0	03 38.304	0.09	4	70.825	-33 03 30.93	0.06	4	70.825				13997
16565	-48	11443	8.6	K5	03 44.857	0.21	4	70.563	-48 10 57.31	0.07	4	70.563				2036
16566	-26	11896	6.20	A0	03 47.098	0.03	101	71.135	-26 26 49.77	0.03	100	71.140	1447	23081	3815	81447
16567	-41	11270	8.9	K2	17 03 51.414	0.03	4	70.934	-41 21 08.21	0.25	4	70.934				2037
16568	-64	3593	8.0	K5	03 51.972	0.09	4	69.332	-64 46 54.51	0.12	4	69.332				13996
16569	-34	11488	8.3	K5	03 55.513	0.16	4	70.337	-34 57 46.55	0.22	4	70.337				13998
16570	-44	11455	8.89	F0	04 01.431	0.14	4	71.081	-44 38 04.60	0.18	4	71.081		23088		2038
16571	-37	11290	8.0	K2	04 05.619	0.07	4	70.666	-37 14 32.16	0.26	4	70.666				13999
16572	+ 1	3380	8.6	A2	17 04 10.239	0.08	2	70.470	+ 1 05 24.60	0.01	2	70.470				14000
16573	+22	3073	5.72	K2	04 10.858	0.15	7	70.293	+22 09 01.09	0.14	6	70.132	3360	23089		33360
16574	- 1	3291	8.8	G5	04 12.537	0.07	3	71.424	- 1 11 35.96	0.23	3	71.424				14001
16575	- 2	4302	8.5	G0	04 13.980	0.16	2	72.949	- 2 13 13.33	0.19	2	72.949				14002
16576	-35	11334	8.0	B9	04 14.735	0.11	4	70.694	-35 08 08.07	0.13	4	70.694				14003
16577	- 9	4502	8.3	A2	17 04 19.973	0.16	2	70.893	- 9 43 34.32	0.05	2	70.893				14004
16578	-48	11450	6.85	K5	04 20.153	0.06	6	68.914	-48 49 07.78	0.07	6	68.914	3361	23093		33361
16579	-61	5841	8.7	K0	04 22.632	0.15	4	69.626	-61 34 27.67	0.12	4	69.626				14005
16580	-65	3398	8.2	K0	04 23.018	0.18	4	69.344	-65 15 16.99	0.13	4	69.344				19907
16581	+ 1	3382	8.7	K0	04 25.460	0.10	2	72.787	+ 1 22 18.51	0.22	2	72.787				14006
16582	-35	11338	8.9	K1	17 04 30.057	0.18	5	71.442	-35 33 23.28	0.10	5	71.442				14007
16583	-19	4527	7.8	K0	04 30.523	0.18	2	70.489	-19 13 19.58	0.12	2	70.489				14008
16584	-73	1797	8.5	M2	04 35.551	0.13	4	69.001	-73 37 01.45	0.23	4	69.001				19908
16585	-25	11966	8.6	A2	04 46.547	0.12	4	70.266	-25 23 37.76	0.07	4	70.266				14009
16586	-49	11189	9.0	A0	04 49.370	0.15	4	71.064	-49 50 49.83	0.16	4	71.064				2039
16587	-24	13119	7.22	G5	17 04 52.166	0.06	4	70.923	-24 56 01.19	0.07	4	70.923		23104		14010
16588	-50	11046	8.5	K0	05 07.984	0.08	4	70.193	-50 30 02.48	0.17	4	70.193				2040
16589	-44	11470	9.12	K0	05 08.581	0.11	4	71.440	-45 05 26.25	0.16	4	71.440		23111		2041
16590	-40	11182	8.0	K0	05 08.632	0.15	4	70.630	-40 47 09.13	0.21	4	70.630				2042
16591	-36	11257	7.86	G0	05 10.539	0.21	4	71.008	-36 34 42.03	0.13	4	71.008		23113		14011
16592	-27	11474	8.32	K5	17 05 10.648	0.26	4	70.928	-28 02 19.17	0.08	4	70.928		23114		14012
16593	-39	11142	9.0	K2	05 10.862	0.22	4	71.367	-39 55 51.62	0.20	4	71.367				14013
16594	-29	13227	7.7	K0	05 19.700	0.16	4	69.998	-29 55 17.72	0.13	4	69.998				14014
16595	-17	4717	6.14	K0	05 20.461	0.03	61	71.278	-17 32 41.00	0.04	59	71.242	1449	23116	3819	31449
16596	-75	1351	9.2	G5	05 23.102	0.03	4	69.881	-76 02 30.77	0.21	4	69.881				19909
16596 SP					17 05 22.993	0.24	4	69.849	-76 02 31.00	0.40	4	69.849				19909
16597	- 4	4233	7.8	K0	05 23.389	0.34	2	72.447	- 4 15 50.38	0.06	2	72.447				14015
16598	-61	5842	6.52	B9	05 31.874	0.08	6	69.562	-61 36 45.36	0.10	6	69.562	3362	23117	3820	33362
16599	-30	13840	5.82	A3	05 35.660	0.06	6	68.968	-30 20 22.40	0.05	6	68.968	3363	23118		33363
16600	-11	4304	7.61	F8	05 37.549	0.26	2	72.113	-11 58 10.72	0.57	2	72.113		23119		14016
16601*	- 0	3230	6.02	A0	17 05 38.699	0.27	2	72.406	- 1 00 55.28	0.22	2	72.406		23120	3821	14017
16602	-54	8046	8.2	K0	05 39.810	0.16	4	68.925	-54 16 19.15	0.18	4	68.925				14018
16603	-46	11247	8.5	F0	05 47.775	0.12	5	70.215	-46 28 40.41	0.16	4	70.441				2043
16604	-42	11878	9.0	K5	05 48.372	0.10	4	69.939	-42 21 00.10	0.08	4	69.939				2044
16605	-56	8040	8.9	G5	05 51.558	0.11	4	69.679	-56 48 10.95	0.15	4	69.679				14019
16606	+ 4	3336	7.25	G0	17 05 52.806	0.11	2	72.008	+ 4 29 23.14	0.02	2	72.008		23123		14020
16607	- 7	4400	8.7	F8	05 57.210	0.07	2	71.488	- 7 34 13.00	0.11	2	71.488				14021
16608	-12	4670	7.5	K2	05 59.380	0.06	2	70.984	-13 03 48.69	0.04	2	70.984				14022
16609	- 6	4555	8.6	G5	06 03.781	0.18	2	71.947	- 6 19 42.94	0.00	2	71.947				14023
16610	-34	11519	7.9	K5	06 03.866	0.09	4	70.351	-34 41 29.59	0.09	4	70.351				14024
16611	- 1	3296	8.8	F8	17 06 07.853	0.26	2	70.394	- 1 02 42.29	0.24	2	70.394				14025
16612	-33	11764	9.2	--	06 08.492	0.10	4	69.903	-33 19 50.09	0.26	4	69.903				14026
16613	- 5	4409	8.0	F2	06 09.823	0.18	2	70.399	- 5 07 42.89	0.15	2	70.399				14027
16614	-17	4724	8.4	A0	06 10.189	0.01	2	71.501	-17 30 22.63	0.07	2	71.501		23130		14028
16615	-72	2037	7.9	K5	06 13.983	0.06	4	69.360	-72 12 46.06	0.14	4	69.360				19910
16616	+ 3	3356	7.8	K0	17 06 30.009	0.17	2	70.368	+ 3 49 21.24	0.09	2	70.368				14029
16617	-16	4426	8.7	K0	06 57.619	0.22	2	71.947	-16 15 02.24	0.03	2	71.947				14030
16618	-20	4655	8.1	K0	06 58.962	0.06	4	68.974	-20 37 04.46	0.09	4	68.974				14031
16619	-78	1125	8.8	M0	07 00.291	0.32	4	70.492	-78 34 33.84	0.30	4	70.492				19911
16619 SP					07 00.314	0.13	4	69.966	-78 34 34.15	0.17	4	69.966				19911
16620	-23	13170	8.5	G5	17 07 01.712	0.14	4	69.490	-23 57 05.98	0.16	4	69.490				14032
16621	-10	4445	5.58	F5	07 02.004	0.03	54	71.704	-10 27 37.18	0.05	54	71.704	1450	23145	3826	31450
16622	+ 0	3646	8.6	K2	07 09.669	0.11	4	71.481	+ 0 36 38.22	0.19	3	71.424				14033
16623	- 8	4392	8.0	G0	07 16.572	0.01	2	70.977	- 8 27 42.90	0.00	2	70.977		23150		14034
16624	-78	1126	7.41	F2	07 26.818	0.15	6	69.539	-78 20 24.89	0.12	6	69.539	3364	23157		33364

16601 A 10355, 6.2m-8.2m, 0°4, 24°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16624	SP				17 07 26.786	0.17	8	71.349	-78 20 25.63	0.27	7	71.411	3364	23157		53364
16625		-43 11471	7.5	K2	07 29.544	0.19	4	70.391	-43 25 42.77	0.14	4	70.391				2045
16626		-83 615	9.1	G5	07 36.174	0.12	5	70.970	-83 37 35.63	0.09	4	70.903				19912
16626	SP				07 35.654	0.23	5	70.942	-83 37 35.80	0.14	4	71.153				19912
16627		-13 4558	8.9	K0	07 43.084	0.19	2	71.967	-13 39 16.90	0.04	2	71.967				14035
16628		-10 4447	8.5	F5	17 07 50.465	0.02	2	71.471	-10 48 56.91	0.16	2	71.471				14036
16629		-70 2364	7.8	K5	07 51.731	0.14	4	69.837	-70 31 44.11	0.23	4	69.837				19913
16630		-32 12428	8.5	K0	07 56.467	0.01	4	70.840	-32 07 54.43	0.10	4	70.840				14037
16631		-68 2902	8.5	G5	07 58.136	0.10	4	69.898	-68 24 25.61	0.14	4	69.898				19914
16632		-38 11620	9.0	K2	08 00.549	0.16	4	70.478	-38 21 04.14	0.05	4	70.478				14038
16633		-37 11355	7.7	K2	17 08 12.783	0.07	4	70.390	-37 47 34.03	0.19	4	70.390				14039
16634		-53 8445	7.28	M0	08 13.177	0.10	4	69.347	-53 18 57.75	0.16	4	69.347		23176		14040
16635		-15 4473	9.0	F2	08 14.716	0.07	2	69.951	-15 09 26.36	0.15	2	69.951				14041
16636		-56 8083	8.7	G5	08 27.378	0.16	4	70.279	-56 20 35.06	0.15	4	70.279				14042
16637		+ 3 3361	8.9	K0	08 29.400	0.10	2	71.492	+ 3 05 57.86	0.36	2	71.492				14043
16638		-51 10739	9.5	K0	17 08 31.685	0.13	4	70.465	-51 48 23.03	0.20	4	70.465				2046
16639		-43 11485	3.44	F2	08 34.044	0.03	66	71.123	-43 10 37.27	0.04	65	71.151	638	23180	3832	30638
16640		-22 4296	8.6	K0	08 35.017	0.10	4	69.800	-22 15 40.29	0.19	4	69.800				14044
16641		-31 13680	9.0	K0	08 36.185	0.13	4	69.963	-31 41 15.45	0.15	4	69.963				14045
16642		-58 7013	8.3	K2	08 40.941	0.05	4	70.276	-58 51 07.70	0.12	4	70.276				14046
16643		-67 3299	8.5	K0	17 08 41.351	0.11	4	70.117	-67 18 38.52	0.19	4	70.117				19915
16644		- 6 4565	8.4	K0	08 41.523	0.01	2	70.447	- 6 34 15.39	0.10	2	70.447				14047
16645		- 9 4512	8.0	K0	08 46.253	0.15	2	70.424	- 9 52 03.05	0.22	2	70.424				14048
16646		-35 11394	8.9	K5	08 47.891	0.13	4	71.416	-35 41 54.93	0.15	4	71.416				14049
16647		-75 1361	8.6	G5	08 48.112	0.35	4	70.770	-75 25 27.44	0.19	4	70.770				19916
16647	SP				17 08 48.141	0.20	4	70.500	-75 25 27.60	0.14	4	70.500				19916
16648		-39 11182	5.65	A0	08 48.693	0.11	6	69.859	-39 26 48.29	0.21	6	69.859	3366	23184	3834	33366
16649		-30 13904	8.6	K5	08 56.420	0.16	4	70.320	-30 42 47.38	0.12	4	70.320				14050
16650		-54 8096	7.22	K0	08 56.891	0.08	4	70.415	-54 47 33.51	0.05	4	70.415		23190		14051
16651		-48 11505	8.7	K0	09 00.703	0.12	2	69.963	-48 59 44.84	0.01	2	69.963				2047
16652		-55 7948	8.7	K0	17 09 02.860	0.12	4	70.493	-55 19 58.35	0.10	4	70.493				14052
16653		-25 12018	6.32	A0	09 09.083	0.16	4	70.391	-25 11 43.11	0.12	4	70.391		23195		14053
16654		- 3 4072	7.8	A5	09 10.918	0.08	3	70.912	- 3 17 19.77	0.04	2	70.581				14054
16655		+ 8 3367	6.39	K0	09 20.480	0.02	95	71.217	+ 7 57 15.23	0.04	93	71.193	1451	23199	3837	81451
16656		-22 4299	8.2	A3	09 22.108	0.10	4	70.582	-22 51 57.49	0.02	4	70.582				14055
16657		-26 11994	8.52	K5	17 09 29.421	0.15	4	70.818	-26 57 36.77	0.22	4	70.818		23201		14056
16658		-11 4316	8.9	G0	09 33.319	0.34	2	72.457	-11 33 07.47	0.10	2	72.457				14057
16659		-21 4544	6.85	F0	09 39.845	0.07	4	70.270	-21 32 49.69	0.06	4	70.270		23205	3838	14058
16660		-47 11338	8.05	K5	09 42.488	0.13	4	70.424	-47 11 38.91	0.19	4	70.424		23207		2048
16661		-32 12460	6.00	B3	09 43.294	0.09	6	71.469	-32 22 46.84	0.12	6	71.469		23209		21144
16662		-28 12928	8.7	F2	17 09 50.502	0.11	4	70.516	-28 58 05.33	0.16	4	70.516				14060
16663		+ 2 3266	8.4	G0	09 50.533	-	1	69.289	+ 2 10 59.06	-	1	69.289		23212		14059
16664		-63 4075	7.9	K2	09 55.330	0.04	4	69.380	-63 48 29.32	0.08	4	69.380				14061
16665		-16 4443	9.0	A5	10 05.471	0.17	2	72.458	-16 27 22.06	0.40	2	72.458				14062
16666		-74 1610	6.41	A0	10 05.944	0.11	6	69.172	-74 28 34.55	0.08	6	69.172	3368	23219		33368
16666	SP				17 10 05.913	0.10	23	71.503	-74 28 34.76	0.09	20	71.540	3368	23219		53368
16667		+10 3165	5.56	K5	10 06.261	0.13	6	70.337	+10 38 39.09	0.11	6	70.337	3369	23220		33369
16668		- 4 4245	8.8	A2	10 08.272	0.10	2	71.992	- 4 07 50.48	0.42	2	71.992				14063
16669		-49 11253	8.9	K0	10 08.947	0.20	4	70.680	-49 52 35.55	0.14	4	70.680				2049
16670		- 2 4313	8.4	G0	10 14.823	0.00	2	70.511	- 2 12 30.75	0.05	2	70.511				14064
16671		-72 2047	7.99	K2	17 10 15.704	0.10	4	69.317	-72 29 57.71	0.09	4	69.317		23226		19917
16672		+ 0 3654	6.52	F5	10 20.967	0.29	2	72.169	+ 0 24 39.76	0.04	2	72.169		23228		14065
16673		-23 13225	8.5	A0	10 25.122	0.07	4	70.491	-23 48 47.57	0.15	4	70.491				14066
16674		-12 4686	7.6	G5	10 25.513	0.43	2	70.474	-12 40 17.98	0.23	2	70.474				14067
16675		-35 11413	9.2	F5	10 29.517	0.12	4	71.464	-35 14 52.40	0.15	4	71.464				14068
16676		-45 11302	8.5	F0	17 10 32.559	0.17	4	70.670	-45 57 37.88	0.27	4	70.670				2050
16677		- 9 4518	8.5	K0	10 34.449	0.28	2	72.455	- 9 37 01.26	0.15	2	72.455				14069
16678		-18 4456	8.4	K0	10 41.564	0.20	2	72.042	-18 28 42.67	0.36	2	72.042				14070
16679		+ 0 3656	8.8	A5	10 44.406	0.20	3	72.492	+ 0 43 50.41	0.33	3	72.492				14071
16680		-43 11511	8.0	K0	10 49.453	0.24	4	70.581	-43 34 46.09	0.10	4	70.581				2051
16681		-38 11669	8.5	K5	17 10 54.565	0.26	4	70.928	-38 27 33.96	0.16	4	70.928				14072
16682		-41 11392	8.43	K0	10 58.484	0.09	4	71.344	-41 24 58.83	0.04	4	71.344		23240		2052
16683		-47 11352	8.0	K5	11 03.979	0.28	4	70.344	-47 51 15.42	0.23	4	70.344				2053
16684		-56 8107	9.0	G5	11 06.801	0.09	4	69.337	-57 01 40.23	0.20	4	69.337				14073
16685		-48 11527	8.5	K0	11 09.254	0.09	4	70.573	-48 30 12.48	0.09	4	70.573				2054
16686		-34 11575	8.4	K5	17 11 11.490	0.13	4	70.688	-34 45 02.39	0.08	4	70.688				14074
16687		-28 12956	8.5	K0	11 26.757	0.09	4	69.859	-28 21 09.34	0.27	4	69.859				14075
16688		+ 5 3353	8.2	K0	11 30.405	0.22	2	69.946	+ 4 58 38.72	0.21	2	69.946				14076
16689		-36 11355	8.8	K2	11 33.631	0.13	4	70.043	-36 23 51.04	0.13	4	70.043				14077
16690		-61 5854	8.9	K0	11 36.848	0.09	4	68.939	-61 07 47.86	0.07	4	68.939				14078
16691		-44 11547	8.25	K0	17 11 39.507	0.13	4	70.448	-44 21 01.90	0.18	4	70.448		23251		2055
16692		- 3 4079	7.2	A0	11 44.739	0.07	2	69.942	- 3 46 19.06	0.26	2	69.942				14079
16693		-42 11970	8.0	K0	11 49.737	0.14	4	70.494	-42 25 37.11	0.09	4	70.494				2056
16694		-31 13747	8.8	A2	11 50.010	0.13	4	69.857	-31 16 16.39	0.13	4	69.857				14080
16695		-20 4685	8.0	K2	11 54.453	0.08	4	69.387	-20 54 47.17	0.07	4	69.387		23256		14081

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
16696	-53	8492	7.8	K5	17 11 55.454	0.16	4	69.334	-53 53 12.19	0.06	4	69.334				14082
16697	-19	4569	8.4	K5	11 56.162	0.03	2	70.559	-19 48 25.64	0.24	2	70.559				14083
16698	-52	10539	7.4	K0	12 00.529	0.14	4	69.948	-52 15 08.39	0.26	4	69.948				14084
16699	-26	12025	7.66	K0	12 06.799	0.14	4	69.483	-26 28 29.57	0.06	4	69.483				14085
16700	-66	3081	8.7	K0	12 17.650	0.02	4	69.900	-66 17 35.20	0.22	4	69.900				19918
16701	-40	11258	9.0	K7	17 12 18.067	0.16	4	70.619	-41 02 36.59	0.18	4	70.619				2057
16702	-2	4321	7.5	G5	12 21.557	0.16	2	70.931	-2 26 50.22	0.32	2	70.931				14086
16703	-33	11884	8.4	K0	12 24.271	0.08	4	70.715	-33 12 44.89	0.15	4	70.715				14087
16704p	-14	4585	6.15	K0	12 29.521	0.16	2	71.958	-14 31 42.37	0.19	2	71.958				14088
16705	+3	3370	8.2	A3	12 35.943	0.41	2	71.466	+3 28 46.47	0.11	2	71.466				14089
16706	-63	4080	9.0	K2	17 12 37.381	0.08	4	69.430	-63 07 11.52	0.11	4	69.430				14090
16707	-67	3309	8.8	M2	12 50.306	0.11	4	69.387	-67 45 19.73	0.18	4	69.387				19919
16708	-39	11253	8.3	K5	12 50.400	0.14	4	70.455	-39 33 20.55	0.12	4	70.455				14091
16709f	+25	3221	3.16	A2	12 58.521	0.06	39	70.699	+24 53 45.32	0.07	38	70.735	641	23294	3845	30641
16710	-8	4406	8.5	A0	13 05.892	0.11	2	71.973	-8 36 45.34	0.07	2	71.973				14092
16711	-13	4577	8.5	A0	17 13 06.825	0.02	2	72.004	-13 26 21.64	0.44	2	72.004				14093
16712	-16	4460	8.4	F5	13 06.966	0.21	2	70.495	-16 08 27.18	0.04	2	70.495				14094
16713	-1	3306	8.9	F8	13 10.552	0.19	2	71.996	-1 14 17.78	0.04	2	71.996				14095
16714	+4	3369	8.7	A2	13 12.888	0.00	2	71.992	+4 08 37.71	0.33	2	71.992				14096
16715	-62	5512	7.6	K5	13 14.922	0.09	4	69.008	-62 38 55.93	0.13	4	69.008				14097
16716	-25	12058	7.06	K0	17 13 22.904	0.14	4	69.538	-25 15 03.56	0.05	4	69.538				14098
16717	-37	11435	8.6	K5	13 23.855	0.15	4	70.866	-37 21 18.66	0.18	4	70.866				14099
16718	-21	4559	7.50	G0	13 23.998	0.19	4	69.889	-21 48 07.64	0.11	4	69.889				14100
16719	-32	12542	8.9	K0	13 33.055	0.10	4	71.066	-32 19 19.43	0.23	4	71.066				14101
16720	+2	3283	6.02	A0	13 42.990	0.21	2	72.007	+2 14 26.81	0.13	2	72.007				14102
16721	-46	11355	8.2	K0	17 13 45.684	0.03	4	71.237	-47 03 01.92	0.24	4	71.237				2058
16722	-32	12545	5.55	F5	13 48.093	0.03	78	71.545	-32 36 31.06	0.03	77	71.549	1452	23313	3848	31452
16723	-17	4759	7.42	G5	13 49.271	0.11	2	72.080	-17 51 37.71	0.28	2	72.080				14103
16724	+1	3408	5.7v	B8	13 59.349	0.04	32	71.443	+1 15 52.65	0.06	31	71.437	1453	23317	3849	31453
16725	-6	4575	6.16	K0	14 01.838	0.05	7	70.332	-6 11 27.65	0.12	6	70.178	3371	23319		33371
16726	-59	6949	9.1	K0	17 14 03.967	0.12	4	69.415	-59 09 59.79	0.20	4	69.415				14104
16727	-35	11445	8.06	B0	14 06.417	0.06	6	71.813	-35 28 59.72	0.04	6	71.813				21145
16728	-50	11149	8.9	K0	14 07.731	0.09	4	69.000	-50 31 19.25	0.10	4	69.000				2059
16729	-10	4464	8.6	F0	14 11.742	0.43	2	72.109	-10 50 42.64	0.21	2	72.109				14105
16730	+3	3376	9.0	G5	14 14.959	0.11	3	71.403	+3 02 22.35	0.34	3	71.403				14106
16731	-30	13998	8.9	K5	17 14 15.089	0.15	4	69.863	-30 22 20.60	0.16	4	69.863				14107
16732	-27	11554	7.43	B2	14 19.310	0.16	4	69.485	-27 42 49.17	0.16	4	69.485				14108
16733	-9	4530	9.0	G5	14 20.065	0.08	3	71.290	-9 08 18.10	0.36	3	71.290				14109
16734	-35	11448	7.8	B0	14 25.460	0.20	4	70.295	-35 10 16.03	0.10	4	70.295				14110
16735	-6	4577	8.1	A0	14 29.701	0.05	2	71.993	-6 43 55.38	0.16	2	71.993				14111
16736	-24	13253	9.0	F2	17 14 29.873	0.11	4	69.936	-25 03 07.19	0.44	4	69.936				14112
16737	-7	4419	8.1	K2	14 40.497	0.10	2	71.966	-7 48 57.99	0.06	2	71.966				14113
16738	-4	4258	7.8	A0	14 41.910	0.12	3	71.857	-4 04 39.18	0.06	3	71.857				14114
16739	-15	4507	8.8	G5	14 43.732	0.10	2	72.016	-15 28 34.52	0.11	2	72.016				14115
16740	-12	4707	8.18	F5	15 03.708	0.08	2	70.446	-12 15 38.17	0.24	2	70.446				14117
16741	-23	13297	6.70	G5	17 15 03.835	0.12	4	69.490	-24 01 11.97	0.11	4	69.490				14116
16742	-32	12573	6.41	B8	15 04.874	0.11	6	71.171	-32 30 02.62	0.11	6	71.171				21146
16743*	-38	11740	8.4	F8	15 04.958	0.15	4	70.933	-38 44 24.53	0.13	4	70.933				14118
16744	-39	11297	7.9	M0	15 05.282	0.23	4	70.738	-39 29 22.81	0.09	3	70.521				14119
16745	-29	13364	8.5	K5	15 16.503	0.05	4	69.982	-29 54 51.07	0.10	4	69.982				14120
16746	-68	2911	7.9	K0	17 15 17.724	0.11	4	69.283	-69 02 37.70	0.13	4	69.283				19920
16747	-14	4598	8.9	K0	15 22.214	0.25	2	71.469	-14 44 47.79	0.32	2	71.469				14121
16748	-76	1201	8.2	K5	15 27.495	0.17	5	70.644	-76 56 37.45	0.24	5	70.644				19921
16748 SP					15 27.409	0.22	4	69.344	-76 56 37.39	0.20	4	69.344				19921
16749	+2	3291	8.7	K0	15 43.750	0.01	2	71.929	+2 42 35.37	0.22	2	71.929				14122
16750	-68	2912	8.8	K0	17 15 44.821	0.11	4	71.267	-68 37 25.08	0.06	4	71.267				19922
16751	-20	4714	9.2	K0	15 50.113	0.29	4	69.529	-20 35 24.83	0.12	4	69.529				14123
16752	-22	4318	8.6	F0	15 53.573	0.18	4	69.997	-22 39 22.64	0.06	4	69.997				14124
16753	-57	8441	8.6	K2	16 00.759	0.06	4	70.192	-58 02 29.96	0.05	4	70.192				14125
16754	-51	10813	8.3	K5	16 02.291	0.13	4	70.298	-51 54 52.27	0.16	4	70.298				2060
16755	-1	3312	8.4	G5	17 16 04.001	0.04	2	69.940	-1 27 31.96	0.04	2	69.940				14126
16756	-15	4514	8.3	F8	16 06.261	0.16	2	71.458	-15 10 06.02	0.15	2	71.458				14127
16757	+1	3415	8.6	K0	16 10.696	0.08	2	71.399	+1 02 42.89	0.01	2	71.399				14128
16758	-57	8446	7.4	K5	16 10.801	0.15	4	70.938	-57 11 51.83	0.14	4	70.938				14129
16759	+11	3156	5.28	K5	16 15.813	0.03	5	69.826	+10 55 00.32	0.15	5	69.826	3372	23382	3857	33372
16760	-4	4262	8.2	K5	17 16 18.702	0.21	2	71.911	-4 15 22.69	0.19	2	71.911				14130
16761	+0	3670	9.0	K	16 22.037	0.04	2	69.920	+0 37 49.96	0.02	2	69.920				14131
16762	-31	13849	8.7	K0	16 29.203	0.10	4	69.383	-31 38 24.06	0.16	4	69.383				14132
16763	-69	2719	5.60	B8	16 30.407	0.03	90	71.195	-70 04 26.05	0.03	87	71.214	642	23388	3859	30642
16764	-60	6784	8.3	K0	16 33.767	0.23	4	70.792	-60 28 15.65	0.32	4	70.792				14133
16765	-2	4332	7.30	K0	17 16 44.399	0.07	2	71.462	-2 41 54.52	0.16	2	71.462				14134
16766	-67	3310	4.74	K2	16 45.104	0.11	6	70.165	-67 43 17.75	0.11	6	70.165	3374	23392	3861	33374
16767	-54	8213	8.7	K2	16 47.003	0.11	4	71.265	-54 21 50.32	0.22	4	71.265				14135
16768	-30	14045	8.8	F2	16 48.079	0.15	4	69.390	-30 22 42.98	0.06	4	69.390				14136
16769	+28	2719	5.78	K0	16 50.794	0.14	6	69.982	+28 52 26.11	0.13	6	69.982	3375	23393		33375

16704 A 10419, 11.3m, 4°2, 153°.
16709 A 10424, 8.1m, 9°3, 262°.

16724 5.7m to 6.4m.
16743 8.8m-10.0m, 1°0, 231°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
16770	-41°	11489	9.11	K5	17 16 53.571	0.19	5	70.590	-41° 08' 03.42	0.15	5	70.590		23395		2061
16771	-88	142	8.29	K0	16 57.399	0.07	4	70.400	-89 07 52.91	0.24	4	70.400		23398		19923
16771	SP				16 57.822	0.11	4	69.988	-89 07 52.96	0.21	4	69.988		23398		19923
16772	-44	11610	8.13	K0	17 02.702	0.22	4	69.951	-44 35 07.32	0.10	4	69.951		23399		2062
16773	-18	4492	8.5	K2	17 04.548	0.20	2	70.100	-18 57 36.55	0.11	2	70.100				14137
16774	-40	11333	7.7	K0	17 08.135	0.13	4	70.615	-40 31 02.05	0.02	4	70.615				2063
16775	-16	4478	8.9	B9	17 09.112	0.02	2	72.392	-16 37 55.80	0.05	2	72.392				14138
16776	+ 2	3296	9.91	M3	17 15.147	0.13	2	71.488	+ 2 11 22.27	0.17	2	71.488		23404		14139
16777	- 7	4427	8.0	G0	17 17.135	0.25	2	72.099	- 7 58 17.70	0.48	2	72.099		23406		14140
16778	-36	11419	9.1	K2	17 17.569	0.09	4	70.048	-36 37 58.82	0.12	4	70.048				14141
16779	- 0	3265	8.0	K5	17 17 25.951	0.17	2	72.414	- 0 16 32.47	0.18	2	72.414				14142
16780	-65	3435	8.4	K0	17 30.592	0.18	4	70.800	-65 16 15.55	0.12	4	70.800				19924
16781	- 5	4429	8.3	F5	17 38.205	-	1	71.638	- 5 27 38.10	0.41	2	72.458				14143
16782	-32	12643	7.9	K5	17 40.956	0.12	4	70.390	-32 46 43.40	0.11	4	70.390				14144
16783	+ 5	3372	8.3	K0	17 44.495	0.25	2	71.996	+ 4 58 22.60	0.05	2	71.996				14145
16784	+ 4	3396	8.5	K0	17 17 45.765	0.14	2	72.498	+ 4 18 40.92	0.26	2	72.498				14146
16785	-49	11354	8.5	K2	17 47.037	0.09	4	71.373	-49 50 53.00	0.12	4	71.373				2064
16786	- 1	3316	9.1	A5	17 47.794	0.37	2	72.511	- 1 32 36.26	0.00	2	72.511				14147
16787	-34	11647	9.4	K2	17 49.821	0.16	4	71.205	-34 18 53.26	0.20	4	71.205				14148
16788	-14	4615	8.8	K0	17 53.775	0.08	3	71.665	-14 06 46.44	0.03	3	71.665				14149
16789	-27	11598	7.6	G5	17 57.719	0.03	4	69.453	-27 22 09.04	0.19	4	69.453				14150
16790	-12	4722	4.35	A0	18 00.803	0.05	6	70.174	-12 47 52.30	0.05	6	70.174	3376	23424		33376
16791	-10	4477	6.42	F0	18 06.366	0.36	2	70.751	-10 38 50.33	0.10	2	70.751		23425		14151
16792	+18	3351	5.17	M0	18 06.539	0.03	83	71.065	+18 06 24.52	0.05	81	71.044	1454	23426	3864	81454
16793	-26	12091	8.5	G5	18 23.831	0.03	4	69.880	-26 17 20.57	0.12	4	69.880				14152
16794	-35	11497	8.3	G5	17 18 26.547	0.10	6	71.007	-35 17 59.65	0.15	6	71.007				14153
16795	-56	8184	8.8	K0	18 32.265	0.05	4	70.118	-56 22 02.41	0.14	4	70.118				14154
16796	-11	4355	8.0	K0	18 34.202	0.01	2	69.849	-11 53 54.83	0.36	2	69.849				14155
16797	-48	11640	9.2	K0	18 41.952	0.05	5	71.390	-48 56 34.54	0.14	5	71.390				2065
16798	-59	6986	8.4	K2	18 45.193	0.11	5	70.199	-59 47 02.71	0.08	5	70.199				14156
16799	-24	13292	3.37	B3	17 18 56.134	0.04	55	71.140	-24 57 05.68	0.04	55	71.140	644	23451	3869	30644
16800	-23	13340	8.21	K0	19 03.893	0.13	4	69.432	-23 31 34.19	0.15	4	69.432		23457		14157
16801	-61	5910	9.1	K0	19 11.659	0.10	3	70.519	-61 18 56.77	0.10	3	70.519				14158
16802	-35	11504	8.1	A2	19 13.432	0.16	4	70.493	-35 20 03.32	0.06	4	70.493				14159
16803	-45	11447	8.0	K2	19 15.508	0.04	4	70.611	-46 01 41.95	0.13	4	70.611				2066
16804	-51	10850	8.5	K2	17 19 18.475	0.13	4	69.515	-51 35 39.12	0.28	4	69.515				2067
16805	-62	5558	5.88	B3	19 18.858	0.07	7	70.736	-62 49 03.79	0.09	7	70.736	3378	23465	3870	33378
16806	-37	11510	8.6	K2	19 22.059	0.07	4	70.636	-37 36 31.83	0.08	4	70.636				14160
16807	-47	11484	5.50	B3p	19 30.549	0.07	6	70.229	-47 25 16.90	0.07	6	70.229	3379	23470	3871	33379
16808	- 9	4540	9.0	A0	19 31.370	0.10	2	71.994	- 9 40 09.17	0.18	2	71.994				14161
16809	-17	4791	8.9	A0	17 19 40.568	0.12	2	71.490	-17 39 23.62	0.04	2	71.490		23480		14162
16810	-42	12093	8.8	K5	19 43.472	0.14	4	70.373	-42 19 16.86	0.07	4	70.373				2068
16811	-64	3627	8.8	G0	19 44.132	0.13	4	70.442	-64 31 25.10	0.21	4	70.442				19925
16812	-47	11490	8.2	G5	19 48.011	0.07	5	70.429	-47 16 31.92	0.08	5	70.429				2069
16813	+ 1	3423	8.8	G0	19 48.325	0.27	2	70.078	+ 1 28 14.10	0.03	2	70.078				14164
16814	-12	4734	8.0	K5	17 19 56.009	0.40	2	71.414	-12 41 39.28	0.17	2	71.414				14165
16815	-20	4750	8.2	K0	19 58.679	0.09	4	69.402	-20 10 06.93	0.09	4	69.402				14166
16816	-33	12012	8.3	K0	19 59.920	0.12	4	70.780	-33 46 24.14	0.14	4	70.780				14167
16817	-10	4482	8.9	K0	20 04.740	0.06	2	71.974	-10 37 30.18	0.07	2	71.974				14168
16818	-24	13308	7.38	A5	20 05.086	0.13	4	68.967	-25 03 03.86	0.06	4	68.967		23488		14169
16819	- 3	4092	8.4	A0	17 20 07.139	0.15	2	71.941	- 3 41 05.05	0.01	2	71.941				14170
16820	- 6	4589	6.96	G0	20 22.394	0.01	2	69.944	- 7 03 28.57	0.13	2	69.944		23496		14171
16821	-79	919	8.8	G5	20 22.514	0.31	4	71.124	-79 48 00.42	0.26	4	71.124				19926
16821	SP				20 22.332	0.07	4	69.865	-79 48 00.39	0.16	4	69.865				19926
16822	-52	10624	8.9	G0	20 27.159	0.12	4	70.689	-52 07 41.22	0.12	4	70.689				14172
16823	+ 0	3678	7.7	G5	17 20 29.316	0.09	2	70.386	+ 0 53 11.94	0.26	2	70.386				14173
16824	-50	11248	8.7	G5	20 32.664	0.15	4	70.788	-50 47 38.18	0.23	4	70.788				2070
16825	-44	11669	5.10	B8	20 35.337	0.08	6	70.855	-44 07 00.86	0.11	6	70.855		23503	3874	21147
16826	-43	11657	8.5	F0	20 40.943	0.15	4	69.946	-43 56 55.39	0.18	4	69.946				2071
16827	-53	8592	8.5	K0	20 46.474	0.11	4	71.274	-53 36 23.80	0.18	4	71.274				14174
16828	-21	4595	8.4	K2	17 20 48.365	0.03	4	70.404	-21 35 43.31	0.05	4	70.404				14175
16829	- 2	4346	7.4	G0	20 49.702	0.01	2	70.439	- 2 04 34.53	0.14	2	70.439				14176
16830	-81	787	8.6	M2	20 54.004	0.14	4	70.861	-81 34 12.72	0.09	4	70.861				19927
16830	SP				20 53.940	0.32	4	69.940	-81 34 13.01	0.22	4	69.940				19927
16831	-26	12105	8.5	K0	20 56.731	0.13	4	69.427	-26 10 38.23	0.28	4	69.427				14177
16832	-39	11418	8.6	K0	17 21 06.500	0.14	4	70.058	-39 29 04.92	0.03	4	70.058				14178
16833	-55	8099	8.7	M0	21 07.354	0.09	4	70.661	-55 56 54.63	0.22	4	70.661				14179
16834	-55	8100	2.80	K2	21 08.221	0.03	91	71.179	-55 29 06.61	0.03	92	71.162	645	23515	3875	30645
16835	-65	3444	9.1	K2	21 10.678	0.28	4	71.297	-65 52 06.00	0.12	4	71.297				19928
16836	-56	8225	3.51	B1	21 10.748	0.15	6	70.987	-56 19 59.63	0.10	6	70.987		23517		21148
16837	-71	2145	8.4	K0	17 21 11.245	0.09	4	70.637	-71 53 01.37	0.08	4	70.637				19929
16838*	- 9	4546	7.77	G0	21 13.308	0.13	2	71.002	- 9 18 46.59	0.02	2	71.002		23519		14180
16839	-45	11488	7.5	K0	21 17.482	0.13	4	70.446	-45 50 57.12	0.16	4	70.446				2072
16840	-36	11473	8.1	M0	21 20.603	0.12	4	69.976	-36 24 52.83	0.10	4	69.976				14181
16841	+ 3	3397	8.5	A2	21 33.144	0.15	2	71.445	+ 3 06 45.48	0.34	2	71.445		23526		14182

16838 8.5m-8.7m, 0.71.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16842	-5	4438	8.2	G0	17 21 35.971	0.16	2	70.397	-5 16 49.96	0.30	2	70.397		23529		14183
16843	-18	4516	6.29	A0	21 41.253	0.10	6	68.967	-18 24 03.92	0.12	6	68.967	3382	23531		33382
16844	-13	4607	8.4	A5	21 53.088	0.07	2	70.453	-13 15 00.40	0.00	2	70.453				14184
16845	-18	4519	8.8	G0	21 55.957	0.04	2	71.945	-18 48 52.97	0.33	2	71.945				14185
16846	-28	13113	8.5	K0	21 56.814	0.18	4	69.536	-28 53 12.35	0.13	4	69.536				14186
16847	+23	3100	5.70	A3	17 22 00.867	0.07	7	70.001	+23 00 19.06	0.10	6	69.792	3383	23546		33383
16848	-44	11703	7.90	K0	22 01.653	0.07	4	70.366	-44 44 08.84	0.14	4	70.366		23548		2073
16849	-49	11429	8.0	K2	22 01.747	0.11	4	70.646	-49 12 34.07	0.10	4	70.646				2074
16850	-62	5581	8.3	K5	22 01.757	0.15	4	69.945	-62 04 39.39	0.21	4	69.945				14187
16851	-33	12036	9.2	M0	22 02.653	0.23	4	70.666	-33 29 05.46	0.04	4	70.666				14188
16852	-80	828	5.93	M3	17 22 03.586	0.02	139	70.999	-80 49 06.71	0.04	134	70.992	1455	23550	3879	61455
16852	SP				22 03.594	0.02	205	71.067	-80 49 06.81	0.04	195	71.055	1455	23550	3879	71455
16853	-41	11600	8.76	K2	22 03.827	0.18	4	71.109	-41 17 42.90	0.08	4	71.109		23551		2075
16854	-8	4436	8.5	A3	22 05.904	0.01	2	71.947	-8 08 09.80	0.45	2	71.947				14189
16855	-35	11543	8.0	K2	22 20.982	0.13	5	70.809	-35 42 42.18	0.08	5	70.809				14190
16856	-48	11693	8.9	K0	17 22 24.538	0.45	4	70.716	-48 32 49.87	0.20	4	70.716				2076
16857	-47	11540	9.0	K0	22 46.276	0.14	4	70.664	-47 52 17.64	0.11	4	70.664				2077
16858	-15	4547	9.0	K0	22 49.100	0.07	2	70.459	-15 13 01.46	0.30	2	70.459				14191
16859	-23	13378	7.9	F5	22 59.430	0.04	4	70.756	-23 07 41.90	0.18	4	70.756				14192
16860	+3	3404	7.36	A2	22 59.825	0.12	2	70.444	+3 21 15.50	0.12	2	70.444		23580		14193
16861	-31	14017	9.2	K0	17 23 01.342	0.23	4	69.875	-31 35 56.24	0.13	4	69.875				14194
16862	-42	12130	8.2	K0	23 03.900	0.19	4	71.193	-42 03 07.65	0.28	4	71.193				2078
16863	-36	11494	7.48	K5	23 05.759	0.15	4	70.559	-37 04 10.09	0.10	4	70.559		23584		14195
16864	-38	11874	7.5	K0	23 08.645	0.09	4	70.433	-38 17 10.12	0.18	4	70.433				14196
16865	-70	2380	7.29	K0	23 09.673	0.09	4	69.972	-70 35 32.13	0.10	4	69.972		23587		19930
16866	+2	3312	7.8	K5	17 23 14.993	0.10	2	72.008	+2 09 49.07	0.13	2	72.008		23592		14197
16867	-6	4592	6.85	B9	23 18.096	0.02	2	71.654	-6 32 20.73	0.31	2	71.654		23593		14198
16868	-16	4512	8.7	G0	23 18.314	0.06	2	72.413	-17 02 19.45	0.26	2	72.413				14199
16869	-24	13337	4.28	F0	23 18.819	0.05	32	71.296	-24 07 54.62	0.04	32	71.296	1457	23597	3882	31457
16870	+4	3419	8.7	A2	23 19.125	0.16	3	72.205	+4 42 16.99	0.10	3	72.205				14200
16871	-1	3329	6.31	F5	17 23 22.101	0.05	23	71.787	-1 36 33.99	0.06	23	71.787	1458	23598	3883	31458
16872	-46	11516	8.0	M0	23 26.431	0.21	4	70.429	-46 40 26.45	0.07	4	70.429				2079
16873	-10	4493	7.43	B	23 30.776	0.14	2	72.125	-10 57 01.92	0.14	2	72.125		23606		14201
16874	-74	1629	8.4	K0	23 38.271	0.15	4	71.293	-74 52 03.26	0.19	4	71.293				19931
16875	-54	8314	8.2	K0	23 44.577	0.15	4	69.443	-54 30 12.18	0.18	4	69.443				14202
16876	+7	3368	5.98	*	17 23 54.072	0.07	6	70.875	+7 38 16.45	0.28	6	70.875	3385	23614	3886	33385
16877	-52	10662	5.77	K0	23 58.401	0.07	6	70.159	-52 15 19.58	0.13	6	70.159	3386	23616	3887	33386
16878	-4	4275	4.61	F0	23 58.411	0.06	10	71.926	-5 02 39.31	0.08	10	71.926	647	23617	3888	30647
16879	+27	2809	6.36	A5	24 00.550	0.08	6	71.271	+26 55 15.21	0.19	6	71.271	3387	23619	3889	33387
16880	+4	3422	4.44	K0	24 01.911	0.07	15	71.942	+4 10 56.37	0.11	15	71.942	1459	23621	3890	31459
16881	-0	3283	7.9	A0	17 24 05.024	0.08	2	70.418	-0 57 34.71	0.19	2	70.418				14203
16882	-64	3638	8.8	K5	24 08.860	0.11	4	70.772	-64 53 17.36	0.07	4	70.772				19932
16883	-29	13557	4.37	F5	24 09.544	0.08	10	70.888	-29 49 28.34	0.10	10	70.888	646	23627	3892	30646
16884	-67	3328	8.1	K0	24 11.520	0.05	4	71.173	-67 14 24.95	0.16	4	71.173				19933
16885	-0	3285	8.4	K0	24 11.693	0.08	2	72.476	-0 08 34.83	0.00	2	72.476				14204
16886	-60	6829	8.3	K5	17 24 12.793	0.20	4	71.074	-60 21 55.32	0.08	4	71.074				14205
16887	-12	4750	6.30	F8	24 13.646	0.04	2	70.550	-12 28 13.51	0.16	2	70.550		23629		14206
16888	-53	8624	7.4	K5	24 19.242	0.04	4	70.610	-53 27 32.90	0.17	4	70.610				14208
16889	+2	3318	8.9	K0	24 24.013	-	1	73.392	+2 23 10.92	-	1	73.392				14210
16890	-29	13563	5.92	B9	24 26.066	0.03	4	70.379	-29 40 59.34	0.14	4	70.379		23637	3893	14211
16891	-24	13353	8.8	A3	17 24 33.154	0.09	4	71.181	-24 37 36.51	0.19	4	71.181				14212
16892	-28	13173	7.8	A0	24 36.304	0.32	4	70.807	-28 19 03.92	0.17	4	70.807				14213
16893	-58	7141	7.12	M3	24 38.304	0.09	4	70.196	-58 59 32.25	0.10	4	70.196		23640		14214
16894	-69	2733	8.9	K0	24 38.869	0.10	4	70.691	-69 51 21.40	0.09	4	70.691				19934
16895	+20	3481	5.42	B5	24 39.527	0.11	6	72.032	+20 07 20.15	0.06	6	72.032	3388	23641		33388
16896	-2	4357	8.1	K2	17 24 40.430	0.13	2	71.312	-2 21 07.09	0.44	2	71.312				14215
16897	-19	4638	8.5	K0	24 45.820	0.14	2	71.484	-19 10 56.01	0.10	2	71.484				14216
16898	-32	12765	9.2	K0	24 49.337	0.15	4	70.756	-32 08 27.45	0.04	4	70.756				14217
16899	-34	11710	8.9	K5	24 55.736	0.10	4	70.280	-34 34 13.64	0.12	4	70.280				14218
16900	-31	14063	7.70	K2	24 58.039	0.03	4	70.261	-31 10 00.51	0.18	4	70.261		23646		14219
16901	-57	8570	7.9	K0	17 24 59.643	0.13	4	70.563	-57 22 18.98	0.23	4	70.563				14220
16902	-73	1838	8.4	K5	25 01.817	0.06	3	70.581	-73 07 26.00	0.25	3	70.581				19935
16903	-80	831	8.7	G5	25 02.349	0.12	5	70.863	-80 30 12.10	0.15	4	70.767				19936
16903	SP				25 02.392	0.18	4	69.626	-80 30 12.23	0.08	4	69.626				19936
16904	-3	4105	8.2	K2	25 06.550	0.08	2	72.174	-3 05 04.62	0.12	2	72.174				14221
16905	-14	4650	8.8	B9	17 25 07.469	0.04	2	69.983	-14 13 44.42	0.24	2	69.983				14222
16906	+4	3425	8.1	K0	25 13.570	0.15	3	71.143	+4 22 10.26	0.12	3	71.143				14223
16907	-28	13185	7.5	K5	25 17.060	0.09	4	70.264	-29 01 06.09	0.19	4	70.264				14224
16908	-20	4776	8.3	K0	25 25.511	0.06	4	71.120	-20 19 25.56	0.11	4	71.120				14225
16909	-63	4112	8.8	K0	25 31.277	0.08	4	70.733	-63 48 46.14	0.15	4	70.733				14226
16910*	-25	12179	7.05	F0	17 25 33.449	0.06	4	70.290	-25 28 14.32	0.10	4	70.290		23665		14227
16911	-52	10672	9.1	K0	25 34.982	0.16	4	71.965	-52 49 09.03	0.25	4	71.965				14228
16912	-50	11311	7.96	K0	25 35.831	0.17	4	70.619	-50 21 32.40	0.24	4	70.619		23666		2080
16913	-22	4349	9.0	K2	25 40.308	0.04	4	72.041	-22 32 29.51	0.18	3	71.583				14229
16914	-26	12146	8.4	G0	25 42.827	0.14	4	71.030	-26 41 22.87	0.07	4	71.030				14230

16876 A0+G.

16910 A 10564, 7.7m-7.9m, 0°7, 122°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
16915	-42	12176	8.0	K2	17 25 43.884	0.12	4	70.566	-42 17 41.67	0.16	4	70.566				2081
16916	-23	13393	8.5	K5	25 49.447	0.20	4	71.226	-23 24 07.65	0.09	4	71.226				14231
16917	-40	11503	8.5	K0	25 51.001	0.19	4	70.379	-40 14 54.39	0.03	4	70.379				2082
16918	-66	3117	9.1	M0	25 52.734	0.06	4	70.674	-66 07 53.22	0.08	4	70.674				19937
16919	-24	13366	8.1	G0	25 56.543	0.10	4	69.958	-24 17 49.03	0.20	4	69.958				14232
16920	-5	4449	8.5	A2	17 26 02.392	0.39	2	71.010	-5 35 58.87	0.45	2	71.010				14233
16921	+3	3418	8.4	G5	26 06.158	0.01	2	71.516	+3 38 42.92	0.08	2	71.516				14234
16922	-82	708	7.9	K5	26 10.357	0.14	3	71.133	-82 23 45.14	0.66	3	71.133				19938
16922	SP				26 10.117	0.20	4	69.998	-82 23 45.34	0.29	4	69.998				19938
16923	+0	3697	5.16	A5	26 16.402	0.10	6	70.006	+0 22 11.17	0.13	6	70.006	3391	23677		33391
16924	-37	11620	8.4	M0	17 26 19.317	0.10	4	70.719	-37 14 16.36	0.09	4	70.719				14235
16925	-39	11518	8.3	K2	26 22.804	0.16	4	70.953	-39 40 02.96	0.14	4	70.953				14236
16926	-45	11598	8.68	K2	26 34.055	0.09	2	69.942	-45 39 21.87	0.13	2	69.942		23680		2083
16927	-60	6842	3.79	B8	26 34.521	0.04	53	70.910	-60 38 43.02	0.04	53	70.910	648	23681	3896	30648
16928	-15	4565	8.0	K0	26 36.819	--	1	69.537	-15 59 45.50	--	1	69.537				14237
16929	+1	3440	8.6	A0	17 26 39.736	0.15	2	70.455	+0 58 25.31	0.10	2	70.455				14238
16930	-56	8299	8.1	K0	26 49.116	0.09	4	70.530	-56 59 45.09	0.11	4	70.530				14239
16931	-38	11939	9.1	K0	26 57.343	0.09	4	71.246	-38 54 45.87	0.09	4	71.246				14240
16932	-34	11730	8.5	K2	27 00.636	0.14	4	70.728	-34 26 32.96	0.08	4	70.728				14241
16933	+3	3423	8.1	A0	27 00.681	0.10	2	70.412	+3 02 44.96	0.04	2	70.412		23685		14242
16934	-32	12824	9.0	M0	17 27 14.868	0.05	4	71.095	-32 53 29.17	0.24	4	71.095				14243
16935	-33	12122	8.4	K0	27 15.501	0.03	4	70.712	-33 36 59.82	0.10	4	70.712				14244
16936	-6	4602	8.0	K0	27 16.116	0.17	2	72.009	-6 52 25.24	0.13	2	72.009				14245
16937	-1	3345	8.5	F2	27 20.995	0.01	2	70.768	-1 16 06.67	0.17	2	70.768		23692		14246
16938	-37	11638	2.80	B3	27 21.652	0.06	23	70.735	-37 15 29.21	0.07	23	70.735	649	23693	3897	30649
16939	-77	1255	8.8	F5	17 27 23.087	0.04	5	71.392	-77 47 42.19	0.29	4	71.429				19939
16939	SP				27 23.012	0.14	4	69.978	-77 47 42.35	0.29	4	69.978				19939
16940	-27	11692	8.4	F8	27 25.922	0.11	4	68.925	-27 09 56.38	0.10	4	68.925				14247
16941	-11	4390	8.8	M1	27 32.298	0.17	2	71.320	-11 35 01.99	0.16	2	71.320				14248
16942	-62	5618	8.7	K0	27 37.669	0.13	4	70.623	-62 07 33.86	0.20	4	70.623				14249
16943	-8	4448	8.7	A0	17 27 37.986	0.36	2	70.760	-8 50 06.47	0.05	2	70.760				14250
16944*	-14	4665	8.9	A5	27 40.918	0.03	2	72.832	-14 44 06.91	0.15	2	72.832				14251
16945	-4	4290	6.64	F0	27 41.160	0.27	2	72.022	-4 19 54.98	0.05	2	72.022		23701		14252
16946*	-9	4562	8.16	G5	27 43.760	0.26	2	72.118	-9 03 31.06	0.29	2	72.118		23703		14253
16947	-51	10933	8.5	K0	27 50.638	0.15	4	70.100	-51 51 13.58	0.10	4	70.100				2084
16948	-49	11511	2.97	B3p	17 27 58.242	0.04	65	70.887	-49 50 20.97	0.04	64	70.881	651	23708	3898	30651
16949	-17	4831	8.5	F8	28 02.694	0.01	2	71.587	-17 20 10.58	0.22	2	71.587				14254
16950*	-21	4626	9.0	B9	28 03.649	0.10	4	69.036	-21 26 53.81	0.07	4	69.036				14255
16951	-40	11550	9.2	K5	28 04.581	0.23	3	70.538	-40 33 58.52	0.21	3	70.538				2085
16952	-55	8192	8.8	K2	28 11.855	0.03	4	70.941	-55 34 49.52	0.19	4	70.941				14256
16953	-35	11653	8.5	K5	17 28 12.685	0.12	4	70.009	-36 02 25.79	0.14	4	70.009				14257
16954	-7	4452	8.2	F2	28 17.311	0.09	2	69.989	-7 54 36.52	0.32	2	69.989				14258
16955	-31	14165	8.6	K5	28 22.167	0.09	4	69.471	-31 50 10.72	0.05	4	69.471				14259
16956*	-30	14334	8.2	K0	28 23.345	0.06	4	69.392	-30 15 23.58	0.17	4	69.392				14260
16957	-10	4507	7.8	F5	28 31.180	0.16	2	72.008	-10 56 04.15	0.34	2	72.008		23722		14261
16958	+26	3034	4.48	K0	17 28 42.977	0.04	49	71.027	+26 08 49.51	0.07	49	71.027	1460	23726	3902	81460
16959	-0	3305	9.0	A0	28 45.305	0.15	3	71.503	-0 18 38.69	0.10	3	71.503				14262
16960	-4	4293	8.7	F5	28 48.226	0.13	3	72.414	-4 51 49.29	0.11	2	72.802				14263
16961	-2	4381	8.2	G0	28 49.227	0.09	2	71.930	-2 30 06.31	0.20	2	71.930		23731		14264
16962	-76	1212	9.0	G0	28 50.061	0.29	4	71.297	-76 50 32.48	0.27	4	71.297				19940
16962	SP				17 28 49.943	0.30	5	70.368	-76 50 32.74	0.17	4	70.436				19940
16963	-51	10949	8.5	G5	28 51.456	0.15	5	71.005	-51 04 00.86	0.21	5	71.005				2086
16964	-60	6857	8.7	K0	28 51.655	0.09	4	70.920	-60 10 24.56	0.09	4	70.920				14265
16965	-50	11357	8.0	K5	28 58.823	0.15	4	70.462	-50 38 25.30	0.03	4	70.462				2087
16966	-20	4786	8.7	G0	29 06.583	0.09	4	70.242	-20 32 49.50	0.12	4	70.242				14266
16967	-71	2156	9.1	G5	17 29 07.144	0.11	4	70.996	-71 43 59.12	0.04	4	70.996				19941
16968	-12	4767	8.3	A2	29 11.920	0.18	2	70.438	-12 29 16.46	0.02	2	70.438				14267
16969	+2	3340	8.5	K0	29 22.169	0.22	2	70.401	+2 17 19.21	0.04	2	70.401				14268
16970	-61	5969	7.46	K5	29 22.499	0.17	4	70.622	-61 29 50.65	0.09	4	70.622		23742		14269
16971	-72	2069	9.1	G5	29 26.266	0.33	4	70.819	-72 18 32.11	0.34	4	70.819				19942
16972	-46	11618	8.0	K0	17 29 35.164	0.04	4	70.344	-46 43 46.89	0.18	4	70.344				2088
16973	-43	11812	9.0	A2	29 38.887	0.20	4	69.936	-43 11 36.12	0.18	4	69.936				2089
16974	-75	1385	8.1	K5	29 46.954	0.27	4	69.951	-75 23 58.68	0.10	4	69.951				19943
16974	SP				29 46.844	0.12	4	70.015	-75 23 58.90	0.28	4	70.015				19943
16975	-35	11684	9.0	G5	29 55.142	0.23	4	70.356	-35 35 49.21	0.06	4	70.356				14270
16976	-60	6866	8.9	K0	17 30 08.767	0.02	4	70.564	-60 26 00.62	0.05	4	70.564				14271
16977	-37	11673	1.71	B2	30 12.607	0.04	59	71.115	-37 04 10.34	0.05	58	71.090	652	23769	3905	30652
16978	-87	266	8.12	K5	30 21.080	0.18	3	70.421	-87 13 10.77	0.43	3	70.421		23774		19944
16978	SP				30 21.210	0.11	4	69.634	-87 13 10.56	0.23	4	69.634		23774		19944
16979	-48	11820	7.48	M0	30 23.031	0.06	4	70.655	-48 26 05.66	0.17	4	70.655		23776		2090
16980	-53	8677	8.2	K0	17 30 26.571	0.05	4	70.216	-53 23 38.68	0.09	4	70.216				14272
16981	-49	11545	8.8	K0	30 27.761	0.11	4	70.740	-49 06 53.51	0.09	4	70.740				2091
16982	-73	1844	8.6	K0	30 29.604	0.09	4	69.456	-73 42 52.54	0.07	4	69.456				19945
16983	-41	11759	8.02	K2	30 31.958	0.14	4	70.756	-41 36 48.83	0.11	4	70.756		23781		2092
16984	-22	4366	7.77	K5	30 33.804	0.13	4	69.846	-22 08 15.55	0.12	4	69.846		23782		14273

16940 A 10587, SDS, 11.2m, 7.6, 190°.

16944 A 10595, 8.9m-9.6m, 0.2.

16946 8.4m-10.1m, 0.4, 292°.

16950 9.0m-10.2m, 0.3, 244°.

16956 SDS, 8.8m-9.1m, 1.7, 169°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
16985	+ 0	3717	8.5	M0	17 30 43.385	0.04	2	69.961	+ 0 08 14.01	0.00	2	69.961				14274
16986	- 3	4127	8.7	A0	30 49.030	0.13	2	70.465	- 3 24 07.70	0.05	2	70.465				14275
16987	- 5	4461	5.69	A2	30 49.493	0.10	4	71.208	- 5 42 37.24	0.05	4	71.208	3392	23788	3906	14276
16988	-30	14403	8.6	K2	30 53.699	0.15	4	69.916	-31 01 58.28	0.10	4	69.916				14277
16989	-13	4653	8.3	K0	31 01.311	0.15	2	70.522	-13 28 16.68	0.41	2	70.522				14278
16990	- 7	4457	8.5	A0	17 31 03.936	0.48	2	71.996	- 7 53 02.75	0.02	2	71.996				14279
16991	-45	11670	9.1	K0	31 06.044	0.28	3	69.551	-45 05 13.35	0.12	3	69.551				2093
16992	-24	13386	8.2	K5	31 10.089	0.13	4	70.653	-24 50 34.27	0.10	4	70.653				14280
16993*	-19	4659	8.2	F0	31 12.299	0.08	2	72.949	-19 08 30.35	0.11	2	72.949				14281
16994	+19	3354	5.59	F5	31 12.306	0.11	6	70.277	+19 17 27.46	0.22	6	70.277	3393	23798		33393
16995	- 1	3356	8.9	K0	17 31 17.260	0.03	2	72.818	- 1 57 33.15	0.19	2	72.818				14282
16996	+16	3218	5.66	K0	31 25.054	0.12	7	70.304	+16 21 04.71	0.09	6	70.145	3394	23803		33394
16997	-56	8333	8.2	G5	31 26.777	0.08	4	70.227	-56 18 59.51	0.09	4	70.227				14283
16998	-29	13735	8.5	K2	31 29.039	0.02	4	70.156	-29 13 23.55	0.20	4	70.156				14284
16999	-63	4126	8.0	K0	31 30.459	0.09	4	70.404	-63 09 42.30	0.19	4	70.404				14285
17000	- 2	4398	7.15	F8	17 31 31.208	0.29	2	71.613	- 3 01 20.61	0.11	2	71.613		23806		14286
17001	-26	12163	8.4	F5	31 39.069	0.11	4	69.969	-26 42 25.87	0.08	4	69.969				14287
17002	-42	12280	8.7	K0	31 50.655	0.13	4	71.095	-43 00 40.42	0.25	4	71.095				2094
17003	-65	3466	8.1	K2	31 51.046	0.17	5	71.151	-65 34 04.25	0.12	5	71.151				19946
17004	- 1	3358	7.9	F8	31 53.377	0.28	2	71.302	- 1 43 36.77	0.17	2	71.302		23814		14288
17005	-16	4554	9.0	B9	17 31 53.402	0.06	2	72.934	-16 35 29.41	0.09	2	72.934				14289
17006	-67	3341	8.7	G5	31 55.550	0.08	4	70.706	-67 33 23.78	0.09	4	70.706				19947
17007	-11	4411	5.68	B8	31 59.384	0.02	98	71.104	-11 12 35.19	0.03	98	71.104	1461	23816	3911	81461
17008	-58	7195	8.0	G5	32 00.100	0.04	4	70.502	-58 20 08.10	0.15	4	70.502				14290
17009	-35	11726	8.5	K0	32 00.708	0.27	5	70.954	-35 30 03.84	0.05	5	70.954				14291
17010	-28	13313	8.2	K0	17 32 01.045	0.14	4	70.025	-28 10 17.57	0.09	4	70.025				14292
17011	-36	11668	8.0	K2	32 04.007	0.10	4	70.371	-36 28 18.38	0.16	4	70.371				14293
17012	+ 4	3448	7.9	K0	32 09.520	0.30	2	72.803	+ 4 07 53.04	0.52	2	72.803		23820		14294
17013	-37	11701	8.7	K0	32 17.644	0.16	4	70.870	-37 58 31.72	0.14	4	70.870				14295
17014	-70	2395	8.5	K5	32 22.760	0.10	4	70.476	-70 27 47.03	0.17	4	70.476				19948
17015	-47	11660	8.5	K0	17 32 26.820	0.20	4	70.876	-47 19 28.44	0.18	4	70.876				2095
17016	-23	13442	8.5	K0	32 28.877	0.14	4	70.370	-23 35 21.72	0.11	4	70.370				14296
17017	-38	12035	7.56	K2	32 30.776	0.16	4	70.412	-38 26 29.49	0.16	4	70.412		23833		14297
17018	- 0	3322	9.0	B9	32 31.744	0.25	2	72.856	- 0 33 56.10	0.46	2	72.856				14298
17019	+12	3252	2.14	A5	32 36.868	0.06	20	71.327	+12 35 36.97	0.09	20	71.327	656	23837	3915	30656
17020	-33	12237	8.5	K5	17 32 38.759	0.14	5	71.645	-33 24 04.49	0.10	5	71.645				14299
17021	-36	11681	8.4	B8	32 41.503	0.22	4	70.689	-36 44 50.66	0.14	4	70.689				14300
17022	-14	4693	8.0	K5	32 52.660	0.15	2	69.961	-14 36 44.35	0.17	2	69.961				14301
17023	-15	4606	8.7	K5	32 56.549	0.06	2	72.027	-15 47 59.13	0.12	2	72.027				14302
17024	-30	14458	8.8	K2	32 59.912	0.13	4	70.014	-30 30 39.51	0.17	4	70.014				14303
17025	-68	2925	7.7	K2	17 33 03.109	0.19	4	70.271	-68 29 35.63	0.11	4	70.271				19949
17026	- 6	4619	8.5	G0	33 09.949	0.26	2	70.469	- 6 10 14.63	0.16	2	70.469				14304
17027	- 4	4308	7.8	A2	33 14.716	0.20	2	72.159	- 4 09 12.24	0.37	2	72.159				14305
17028	-11	4417	8.9	F2	33 21.131	0.27	2	72.181	-11 58 44.26	-	1	72.667				14306
17029	-20	4814	8.5	K5	33 24.010	0.17	4	69.982	-20 56 48.31	0.10	4	69.982				14307
17030	-39	11659	7.9	K0	17 33 28.619	0.17	4	70.817	-39 38 18.31	0.15	4	70.817				14308
17031	-52	10728	8.5	K5	33 30.663	0.02	4	70.984	-52 38 25.38	0.08	4	70.984				14309
17032	+ 4	3456	8.6	K0	33 41.440	0.18	2	72.174	+ 4 52 27.19	0.04	2	72.174				14310
17033	-42	12312	2.04	F0	33 43.387	0.05	30	71.198	-42 58 05.32	0.06	29	71.183	654	23857	3918	30654
17034	+ 1	3467	8.7	K0	33 48.230	0.13	2	71.312	+ 1 16 35.96	0.07	2	71.312				14311
17035	-44	11916	8.5	K0	17 33 49.986	0.11	4	70.421	-44 07 35.95	0.25	4	70.421				2096
17036	+ 3	3458	8.8	K0	33 51.544	0.43	2	73.319	+ 3 07 24.06	0.29	2	73.319				14312
17037	-64	3652	9.2	K0	33 55.741	0.16	4	69.350	-64 12 41.52	0.13	4	69.350				19950
17038	- 9	4579	8.9	A5	33 56.425	0.11	2	72.971	- 9 11 54.29	0.14	2	72.971				14313
17039	- 9	4580	8.6	F5	33 57.270	0.25	2	70.487	- 9 48 07.96	0.29	2	70.487				14314
17040	-47	11680	8.8	G5	17 33 59.767	0.09	4	71.607	-48 00 59.73	0.12	4	71.607				2097
17041	-35	11750	8.1	B2	34 10.046	0.04	4	70.709	-35 18 13.39	0.21	4	70.709				18457
17042	-32	13015	9.2	F8	34 10.833	0.15	4	70.498	-32 09 18.49	0.09	4	70.498				14315
17043	-34	11858	8.4	K2	34 12.593	0.11	4	70.964	-34 37 00.61	0.12	4	70.964				14316
17044	-46	11696	8.5	F0	34 14.093	0.12	4	70.643	-46 33 21.41	0.07	4	70.643				2098
17045	-13	4682	8.4	F2	17 34 22.853	0.07	2	70.435	-13 58 17.65	0.28	2	70.435				14317
17046	-79	926	8.5	K5	34 25.833	0.11	5	70.998	-79 27 07.57	0.46	3	71.445				19951
17046 SP					34 25.765	0.15	4	69.998	-79 27 07.44	0.10	4	69.998				19951
17047	-15	4621	3.64	A5	34 43.218	0.04	41	71.278	-15 22 09.07	0.05	41	71.278	658	23881	3921	30658
17048	-15	4622	5.92	A5	34 43.912	0.42	2	71.414	-15 32 31.89	0.43	2	71.414		23882	3923	14318
17049	-24	13405	8.6	B8	17 34 50.115	0.09	4	69.425	-24 56 13.57	0.12	4	69.425				14319
17050	-54	8413	8.8	M0	34 56.641	0.19	4	69.432	-55 01 26.47	0.07	4	69.432				14320
17051f	- 0	3327	8.8	A0	34 58.546	0.13	2	72.867	- 1 00 15.91	0.51	2	72.867				14321
17052	-22	4383	8.2	F0	35 02.403	0.16	4	69.949	-22 33 12.16	0.15	4	69.949				14322
17053	- 8	4472	4.65	B8	35 07.489	0.07	6	70.300	- 8 05 24.49	0.10	6	70.300	3399	23889		33399
17054	-19	4674	7.8	K5	17 35 10.655	0.03	2	71.480	-19 56 46.05	0.07	2	71.480				14323
17055	- 8	4473	7.5	G0	35 16.864	0.15	2	72.803	- 9 00 05.17	0.15	2	72.803				14324
17056	+24	3218	5.67	A0	35 27.370	0.14	6	70.859	+24 20 18.02	0.11	6	70.859	3400	23901	3926	33400
17057	-67	3343	6.59	G5	35 27.561	0.12	6	69.633	-67 49 38.67	0.10	6	69.633	3401	23902		33401
17058	- 8	4474	8.6	A2	35 29.286	0.26	2	70.474	- 8 04 39.71	0.11	2	70.474				14325

16993 9.0m-9.0m, 0°1.

17051 A 10676, 11.3m, 3°3, 297°.

CATALOG OF 23,001 STARS FOR 1950.0

471

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
17059	-41	11866	9.5	K0	17 35 42.099	0.03	4	71.140	-41 42 23.97	0.09	4	71.140				2099
17060	-54	8425	8.5	K5	35 43.339	0.09	4	69.994	-54 37 05.38	0.07	4	69.994				14326
17061	-12	4791	8.5	K0	35 44.326	0.12	2	71.489	-12 20 21.26	0.25	2	71.489				14327
17062	-43	11904	8.0	K2	35 44.619	0.11	4	70.332	-43 08 14.38	0.10	4	70.332				2100
17063	-59	7102	8.8	K0	35 48.020	0.11	4	71.096	-59 43 02.40	0.06	4	71.096				14328
17064	-4	4321	8.5	K0	17 35 57.927	0.11	2	72.817	-4 36 52.09	0.45	2	72.817				14329
17065	-26	12213	7.5	G0	35 58.425	0.14	4	69.772	-26 54 34.51	0.22	4	69.772				14330
17066	-62	5657	8.42	K0	36 00.851	0.15	4	69.450	-62 08 09.56	0.14	4	69.450		23909		14331
17067	-10	4530	8.6	K0	36 08.529	0.06	2	71.485	-10 51 32.93	0.28	2	71.485				14332
17068	-73	1852	7.19	A0	36 10.052	0.14	7	70.000	-73 22 02.46	0.13	6	69.791	3402	23912		33402
17068 SP					17 36 10.066	0.09	35	71.652	-73 22 03.15	0.17	34	71.639	3402	23912		53402
17069	-17	4871	9.0	G5	36 10.619	0.03	2	70.502	-17 25 09.58	0.02	2	70.502				14333
17070	-36	11746	8.9	M2	36 15.210	0.15	4	70.693	-36 14 04.86	0.17	4	70.693				14334
17071	-45	11763	8.8	K2	36 17.179	0.15	4	70.498	-45 06 45.17	0.12	4	70.498				2101
17072	-38	12097	8.0	K0	36 20.839	0.06	4	70.480	-38 20 29.91	0.24	4	70.480				14335
17073	-18	4598	8.7	B5	17 36 22.102	0.03	2	72.020	-18 23 04.45	0.17	2	72.020				14336
17074	-5	4475	8.2	F8	36 23.229	0.07	2	71.973	-5 29 13.61	0.15	2	71.973				14337
17075	+2	3372	7.49	F0	36 33.058	0.13	2	72.097	+2 04 52.72	0.60	2	72.097		23920		14338
17076	+4	3469	8.3	F2	36 37.992	0.17	2	72.034	+4 30 03.20	0.21	2	72.034				14339
17077	-57	8665	9.1	K0	36 39.641	0.11	4	69.457	-57 52 03.88	0.12	4	69.457				14340
17078	-13	4696	7.6	F0	17 36 40.269	0.32	2	70.502	-13 37 22.62	0.23	2	70.502				14341
17079	-49	11617	7.7	K0	36 40.734	0.10	5	70.046	-49 40 41.66	0.28	5	70.046				2102
17080	-11	4430	7.85	F0	36 41.123	0.15	2	72.030	-11 14 25.38	0.22	2	72.030		23924		14342
17081	-37	11774	9.0	G5	36 44.404	0.05	4	69.986	-37 04 09.52	0.13	4	69.986				14343
17082	-32	13086	6.86	B8	36 45.398	0.05	6	70.573	-32 10 29.52	0.12	6	70.573	3403	23928	3928	33403
17083	+3	3465	6.6	K0	17 36 47.620	0.15	3	72.408	+3 34 57.44	0.28	3	72.408		23929	3929	14344
17084	+0	3744	9.2	A0	36 49.668	0.02	2	72.005	+0 39 07.77	0.53	2	72.005				14345
17085	-5	4476	8.6	A2	36 52.007	0.35	2	70.443	-5 49 57.06	0.48	2	70.443				14346
17086	-63	4133	9.0	G5	37 01.299	0.30	4	69.615	-63 44 15.44	0.07	4	69.615				14347
17087	-6	4624	9.1	G0	37 06.887	0.10	2	70.570	-6 27 08.63	0.25	2	70.570				14348
17088	-82	710	8.6	F8	17 37 12.594	0.13	5	70.796	-82 45 13.24	0.20	4	70.684				19952
17088 SP					37 12.200	0.10	4	69.957	-82 45 13.94	0.36	4	69.957				19952
17089	-60	6904	8.9	K0	37 15.905	0.19	4	69.620	-60 24 28.29	0.15	4	69.620				14349
17090	-35	11804	8.7	K2	37 16.618	0.22	4	70.054	-35 20 27.24	0.19	4	70.054				14350
17091	-25	12206	8.6	F2	37 29.243	0.03	4	69.959	-25 35 55.93	0.07	4	69.959				14351
17092	-46	11747	6.11	A0	17 37 31.261	0.09	6	69.693	-46 53 48.29	0.09	6	69.693	3404	23951	3931	33404
17093	-30	14569	9.0	K2	37 31.662	0.10	4	69.846	-30 25 03.58	0.10	4	69.846				14352
17094*	-58	7229	8.4	K0	37 31.928	0.15	4	70.186	-58 47 46.66	0.07	4	70.186				14353
17095	-3	4150	7.3	F0	37 31.997	0.17	2	71.005	-3 30 36.89	0.08	2	71.005				14354
17096	-27	11796	8.14	B9	37 34.016	0.08	4	69.825	-27 52 03.41	0.08	4	69.825		23952		14355
17097	-85	463	8.3	K0	17 37 35.892	0.13	4	70.883	-85 48 48.07	0.12	4	70.883				19953
17097 SP					37 35.719	0.22	4	69.982	-85 48 48.24	0.24	4	69.982				19953
17098	-29	13853	8.5	K0	37 41.280	0.15	4	69.914	-29 34 28.36	0.14	4	69.914				14356
17099	+3	3469	8.9	K0	37 42.768	0.11	2	71.470	+3 14 54.88	0.55	2	71.470				14357
17100	-23	13501	7.98	B8	37 46.719	0.15	4	71.834	-23 48 39.83	0.09	4	71.834		23958		14358
17101	-40	11717	7.95	K5	17 37 47.175	0.20	4	70.380	-40 56 52.83	0.16	4	70.380		23959		2103
17102	-18	4612	8.6	G5	37 48.112	0.16	2	71.963	-18 03 35.45	0.19	2	71.963				14359
17103	-50	11466	8.7	G0	37 49.556	0.10	4	69.791	-50 43 31.73	0.06	4	69.791				2104
17104	-20	4842	8.6	A5	37 52.063	0.09	4	69.967	-20 50 21.43	0.08	4	69.967				14360
17105	-2	4427	8.0	F5	37 54.033	0.22	2	69.964	-2 50 21.66	0.04	2	69.964				14361
17106	-33	12345	8.4	K0	17 38 01.266	0.07	4	70.687	-33 39 57.31	0.18	4	70.687				14362
17107p	-81	795	8.1	K0	38 02.449	0.25	3	70.533	-81 52 29.50	0.39	3	70.533				19954
17107 SP					38 02.299	0.12	4	70.381	-81 52 29.51	0.39	4	70.381				19954
17108	-39	11743	8.6	K0	38 02.726	0.08	4	70.642	-39 16 33.40	0.11	4	70.642				14363
17109	-14	4724	9.0	G5	38 02.919	0.06	2	71.956	-14 14 00.20	0.33	2	71.956				14364
17110	-47	11721	9.0	K0	17 38 12.860	0.14	4	70.973	-47 45 24.35	0.39	4	70.973				2105
17111	-32	13164	8.6	G5	38 16.795	0.17	4	70.620	-32 53 42.12	0.18	4	70.620				14365
17112	-19	4683	8.2	F5	38 20.658	0.18	2	71.944	-19 25 58.02	0.20	2	71.944				14366
17113	-70	2408	8.1	K5	38 27.638	0.13	5	70.875	-70 13 07.51	0.12	5	70.875				19955
17114	-74	1650	9.1	K2	38 28.009	0.15	5	71.625	-74 57 30.05	0.13	5	71.625				19956
17115	-21	4701	8.8	A0	17 38 30.136	0.12	4	69.553	-21 55 13.23	0.15	4	69.553				14367
17116	-1	3377	8.3	K0	38 30.297	0.31	2	71.928	-1 22 17.87	0.03	2	71.928		23975		14368
17117	-84	560	7.78	G5	38 32.144	0.14	5	70.769	-84 05 34.96	0.13	4	70.650		23976		19957
17117 SP					38 31.894	0.11	4	70.371	-84 05 35.29	0.11	4	70.371		23976		19957
17118	-78	1144	8.2	K0	38 32.945	0.14	4	70.530	-78 15 18.15	0.17	4	70.530				19958
17118 SP					17 38 32.945	0.09	4	69.671	-78 15 18.00	0.37	4	69.671				19958
17119	-66	3133	8.5	F8	38 35.945	0.24	4	70.783	-66 47 05.82	0.09	4	70.783				19959
17120	-12	4808	4.39	A2	38 36.035	0.08	6	69.155	-12 51 01.86	0.06	6	69.155	3405	23978	3933	33405
17121	-42	12394	8.6	K0	38 41.542	0.13	4	70.440	-42 47 10.30	0.07	4	70.440				2106
17122	-31	14423	8.9	K0	38 43.180	0.11	4	69.977	-31 19 35.93	0.15	4	69.977				14369
17123	-51	11074	7.92	K5	17 38 45.846	0.05	5	70.244	-51 49 10.33	0.15	4	69.958		23983		2107
17124	-72	2087	7.7	K2	38 53.881	0.18	5	71.578	-72 46 07.19	0.34	5	71.578				19960
17125	-38	12137	2.51	B2	39 01.544	0.04	48	71.650	-39 00 23.10	0.04	48	71.650	660	23988	3935	30660
17126	-0	3346	8.4	A0	39 04.791	0.10	2	69.943	-0 39 12.05	0.01	2	69.943				14370
17127	-61	6018	8.3	M0	39 05.450	0.08	4	71.879	-61 31 26.54	0.27	4	71.879				14371

17094 SDS, 8.3m-9.9m, 1°0, 295°.

17107 SDS, 9.1m, 9°7, 72°.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
17128	-34	11975	9.0	G5	17 39 19.658	0.17	5	71.037	-34 48 20.33	0.08	5	71.037				14372
17129	-44	11994	8.19	G5	39 27.567	0.10	4	70.768	-44 44 38.56	0.15	4	70.768		24002		2108
17130	-7	4485	8.7	F0	39 31.136	0.08	3	71.266	-8 02 53.49	0.41	3	71.266				14373
17131	-15	4652	8.7	K5	39 36.276	0.32	2	71.973	-15 58 11.76	0.18	2	71.973				14374
17132	-56	8411	7.65	K0	39 43.659	0.19	4	70.947	-56 20 00.18	0.11	4	70.947		24008		14375
17133	-15	4655	7.38	A0	17 39 47.897	0.05	2	72.037	-15 32 10.93	0.20	2	72.037		24012		14376
17134	-4	4332	6.79	M0	39 55.736	0.14	2	72.318	-4 49 36.98	0.22	2	72.318		24016		14377
17135	-49	11661	8.5	K5	39 59.923	0.20	3	71.440	-49 54 15.92	0.24	3	71.440				2109
17136	-46	11796	8.0	K2	40 00.067	0.02	3	70.472	-46 35 03.01	0.12	3	70.472				2110
17137	-51	11094	5.26	G5	40 10.222	0.04	34	70.805	-51 48 39.00	0.05	33	70.805	662	24024	3939	30662
17138	-27	11853	8.4	K0	17 40 12.672	0.24	4	69.911	-27 13 10.91	0.13	4	69.911				14378
17139	-48	11974	8.0	G5	40 15.503	0.10	4	70.912	-48 17 25.42	0.15	4	70.912				2111
17140	-68	2936	7.4	F2	40 19.969	0.06	4	71.272	-68 37 37.64	0.22	4	71.272				19961
17141	-54	8462	8.8	K0	40 22.212	0.16	4	71.232	-54 52 04.16	0.19	4	71.232				14379
17142	-21	4712	4.89	F5	40 25.737	0.02	79	70.748	-21 39 39.21	0.03	77	70.690	1463	24030	3940	81463
17143	-50	11505	9.0	A0	17 40 28.933	0.16	4	71.779	-50 19 33.39	0.22	4	71.779				2112
17144	+1	3487	8.6	F0	40 34.774	0.13	2	73.418	+1 45 35.08	0.12	2	73.418				14380
17145	-40	11786	8.6	K5	40 47.649	0.23	4	71.083	-40 05 21.57	0.12	4	71.083				2113
17146	-64	3662	3.58	K0	40 49.147	0.03	71	71.109	-64 42 11.22	0.05	70	71.092	661	24044	3941	30661
17147	-51	11102	8.7	K5	40 53.132	0.10	4	71.380	-51 21 55.71	0.15	4	71.380				2114
17148	-22	4399	8.5	K0	17 40 54.762	0.07	4	69.491	-22 44 26.11	0.09	4	69.491				14382
17149	-13	4732	6.27	F2	40 58.811	--	1	69.360	-13 29 11.06	--	1	69.360		24047		14383
17150	+4	3489	2.94	K0	40 59.973	0.05	9	70.884	+4 35 15.10	0.07	8	70.799	665	24048	3943	30665
17151	-45	11851	8.5	K2	41 01.266	0.14	4	71.176	-45 43 24.93	0.11	4	71.176				2115
17152	+14	3321	6.21	F5	41 05.217	0.08	7	70.808	+14 18 59.79	0.25	5	70.623	3407	24052		33407
17153	-52	10819	9.0	G5	17 41 11.125	0.19	5	72.011	-52 42 56.45	0.27	3	71.070				14384
17154	-17	4906	7.34	G5	41 22.113	--	1	71.658	-17 24 57.79	--	1	71.658		24060		14387
17155	+4	3493	8.0	K5	41 28.058	--	1	71.682	+4 21 13.79	--	1	71.682				14389
17156	-11	4451	9.1	F2	41 34.832	0.40	2	70.612	-11 59 52.93	0.09	2	70.612				14390
17157	+0	3763	8.0	F2	41 36.620	--	1	71.614	+0 22 32.69	--	1	71.614				14391
17158	-21	4720	8.39	G5	17 41 40.954	0.04	4	69.894	-22 00 13.67	0.23	4	69.894		24069		14392
17159	-53	8763	9.0	K5	41 41.074	0.17	4	70.332	-53 34 08.54	0.29	3	69.893				14393
17160	-59	7131	8.5	K2	41 44.281	0.35	4	70.071	-59 19 13.52	0.08	4	70.071				14394
17161	-10	4545	8.18	F0	41 48.734	--	1	69.280	-10 18 57.08	--	1	69.280			3946	14395
17162	-43	11983	8.0	K5	41 49.745	0.08	4	70.442	-43 35 16.50	0.11	4	70.442				2116
17163	-24	13446	8.5	K0	17 41 50.046	0.22	4	70.281	-24 39 49.66	0.13	4	70.281				14396
17164	-33	12419	8.8	K5	41 50.918	0.10	4	70.629	-33 48 13.86	0.11	4	70.629				14397
17165	-30	14654	8.9	K0	41 54.386	0.04	4	70.453	-30 09 47.35	0.06	4	70.453				14398
17166	-32	13278	9.1	G5	42 01.405	0.12	4	70.779	-32 29 24.49	0.29	4	70.779				14399
17167*	+2	3390	6.25	A0	42 03.314	--	1	72.389	+2 35 58.18	--	1	72.389		24077		14400
17168	-1	3386	7.9	K2	17 42 06.010	0.40	2	72.790	-1 43 12.38	0.19	2	72.790			3947	14401
17169	-77	1268	8.5	K2	42 11.111	0.14	4	70.709	-77 13 13.97	0.22	4	70.709				19962
17169 SP					42 11.181	0.23	4	70.447	-77 13 14.78	0.23	4	70.447				19962
17170	-2	4441	8.9	A0	42 14.983	0.12	2	72.929	-2 56 28.90	0.07	2	72.929				14402
17171	-0	3352	8.5	A0	42 16.735	0.25	2	71.928	-0 06 52.94	0.05	2	71.928				14403
17172	-47	11788	9.0	K0	17 42 28.396	0.17	5	71.246	-47 08 17.32	0.11	5	71.246				2117
17173	-44	12044	8.57	K0	42 29.172	0.16	4	70.597	-44 35 24.85	0.14	4	70.597		24083		2118
17174	-69	2754	7.9	K0	42 36.310	0.07	4	70.223	-69 32 32.07	0.09	4	70.223				19963
17175	-2	4443	7.3	A0	42 36.595	0.16	2	71.466	-2 44 33.38	0.25	2	71.466				14404
17176	-20	4865	8.4	K5	42 42.127	0.06	4	71.035	-20 11 06.71	0.12	4	71.035				14405
17177	-76	1220	7.70	K0	17 42 42.520	0.02	4	70.449	-76 11 05.61	0.13	4	70.449		24087		19964
17177 SP					42 42.438	0.14	5	70.376	-76 11 05.14	0.56	4	70.446		24087		19964
17178	-64	3667	8.9	G3	42 46.467	0.16	4	70.048	-64 03 03.86	0.12	4	70.048				19966
17179	-65	3486	9.1	K0	42 48.362	0.03	4	70.375	-65 49 36.27	0.23	4	70.375				19967
17180	-28	13555	8.5	K0	42 49.329	0.05	4	69.899	-28 39 33.08	0.06	4	69.899				14406
17181	-39	11814	8.4	K0	17 42 56.827	0.13	4	71.039	-39 05 30.92	0.08	4	71.039				14407
17182	-61	6040	7.7	K2	43 03.245	0.08	5	70.809	-62 00 53.84	0.12	5	70.809				14408
17183	-71	2173	7.34	A0	43 18.611	0.16	7	71.074	-71 04 42.49	0.18	6	71.044	3409	24103		33409
17183 SP					43 18.635	0.16	10	71.941	-71 04 42.97	0.29	10	71.941	3409	24103		53409
17184	-26	12327	8.3	K2	43 18.803	0.06	4	70.236	-26 10 55.11	0.16	4	70.236				14409
17185	-57	8728	8.0	K2	17 43 19.637	0.15	5	70.430	-57 23 11.08	0.17	5	70.430				14410
17186	-41	12019	7.5	K5	43 20.812	0.16	4	69.898	-41 15 49.55	0.05	4	69.898				2119
17187	-24	13467	8.2	K0	43 21.715	0.13	4	70.006	-24 07 21.30	0.20	4	70.006				14411
17188	-29	13960	8.0	K5	43 25.606	0.05	4	69.430	-29 38 50.86	0.18	4	69.430				14412
17189	-14	4760	9.0	K5	43 29.228	0.04	2	70.418	-14 03 47.38	0.22	2	70.418				14413
17190	-42	12466	9.1	K2	17 43 32.324	0.11	4	70.806	-42 59 38.70	0.13	4	70.806				2120
17191	-15	4675	9.0	F8	43 43.401	0.09	2	70.492	-15 59 07.36	0.05	2	70.492				14414
17192	-7	4497	7.32	G5	43 48.673	0.01	2	72.031	-7 57 59.51	0.36	2	72.031		24117	3949	14415
17193	-36	11882	7.8	K0	43 49.157	0.10	4	70.742	-36 58 05.69	0.07	4	70.742				14416
17194	+1	3501	6.86	K2	43 52.332	0.04	2	70.473	+1 03 44.64	0.33	2	70.473		24119		14417
17195	-3	4172	8.4	A3	17 44 03.295	0.14	2	70.484	-3 02 07.26	0.18	2	70.484				14418
17196	-35	11922	9.2	K0	44 03.858	0.06	4	70.972	-35 57 36.23	0.08	4	70.972				14419
17197	-34	12064	8.8	K0	44 04.470	0.09	5	70.969	-34 30 59.05	0.10	5	70.969				14420
17198	-40	11838	3.14	F5p	44 05.092	0.03	34	71.284	-40 06 35.15	0.06	34	71.284	666	24125	3950	30666
17199	-37	11876	8.8	K0	44 05.664	0.31	4	70.761	-37 49 44.14	0.15	4	70.761				14421

17167 Star observed precedes SRS 14400, 20°9, 94°. A 10750.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	PK4	GC	N30	No*
17200	-6	4647	8.3	K2	17 44 08.774	0.21	2	72.430	-6 50 41.82	0.14	2	72.430				14422
17201	-38	12194	8.2	K5	44 11.208	0.17	4	70.650	-38 20 34.78	0.14	4	70.650				14423
17202	-31	14574	8.4	G5	44 22.184	0.11	4	70.679	-31 10 22.14	0.19	4	70.679				14424
17203	-55	8311	7.9	K2	44 24.504	0.09	4	70.295	-55 20 13.28	0.08	4	70.295				14425
17204	-27	11930	4.4v	*	44 24.649	0.05	23	70.550	-27 48 49.37	0.07	22	70.420	1464	24135	3952	31464
17205	-55	8312	6.28	F0	17 44 27.701	0.11	6	71.134	-55 23 08.40	0.10	6	71.134	3412	24136	3953	33412
17206	-8	4499	8.8	A0	44 28.114	--	1	73.297	-8 32 23.56	--	1	73.297				14426
17207	+27	2888	3.48	G5	44 29.479	0.06	14	70.054	+27 44 40.21	0.10	13	69.859	667	24138	3954	30667
17208	-18	4645	7.54	F0	44 31.501	0.01	2	72.420	-18 05 24.13	0.14	2	72.420		24140		14427
17209	-20	4874	7.08	A3	44 32.253	0.09	4	71.412	-20 49 12.80	0.15	4	71.412		24141		14428
17210	-57	8743	8.5	K5	17 44 42.073	0.07	4	70.036	-57 42 44.74	0.13	4	70.036				14429
17211	-14	4770	6.07	B9	44 45.515	0.06	6	71.062	-14 42 32.20	0.16	6	71.062	3413	24148	3956	33413
17212	-18	4648	8.9	K2	44 47.949	0.32	2	71.311	-18 54 50.00	0.03	2	71.311				14430
17213	-78	1150	8.4	G5	44 52.310	0.16	4	70.458	-79 01 43.38	0.12	4	70.458				19968
17213 SP					44 52.348	0.06	4	70.050	-79 01 43.40	0.20	4	70.050				19968
17214	+15	3270	7.8	A0	17 44 53.300	0.07	4	69.904	+15 03 14.91	0.27	4	69.904				27323
17215	-48	12050	9.0	G5	44 54.940	0.14	4	71.136	-48 13 43.32	0.22	4	71.136				2121
17216*	+17	3334	5.58	A0	44 55.515	0.05	3	69.374	+17 42 50.68	0.07	3	69.374		24150	3957	27325
17217	-23	13576	8.3	F2	45 20.080	0.06	4	69.938	-23 12 59.46	0.07	4	69.938				14432
17218	-26	12367	6.16	B3	45 20.111	0.22	3	70.730	-26 57 32.46	0.05	3	70.730		24160	3958	21149
17219	+2	3403	3.74	A0	17 45 22.993	0.03	58	71.515	+2 43 26.65	0.05	56	71.523	668	24162	3959	80668
17220	-16	4620	8.6	A0	45 31.603	--	1	71.554	-16 48 40.16	--	1	71.554				14434
17221	-0	3361	7.6	K5	45 41.155	0.08	2	72.028	-0 00 02.85	0.22	2	72.028				14435
17222	-28	13622	8.5	K0	45 41.334	0.04	4	70.692	-28 13 50.53	0.13	4	70.692				14436
17223	-30	14738	9.0	M0	45 42.429	0.13	2	68.945	-30 28 45.42	0.05	2	68.945				14437
17224	-85	469	6.44	F5	17 45 43.238	0.08	6	68.875	-85 12 21.29	0.05	6	68.875	3989	24171	3960	33989
17224 SP					45 43.143	0.07	6	68.985	-85 12 20.87	0.34	6	68.985	3989	24171	3960	53989
17225	-72	2106	9.2	K0	45 46.943	0.34	4	71.132	-72 39 16.48	0.26	4	71.132				19969
17226	-10	4553	8.1	K0	45 52.905	0.01	2	70.438	-10 15 28.18	0.15	2	70.438				14438
17227	-33	12497	8.6	M0	45 53.502	0.05	4	70.982	-33 14 06.16	0.09	4	70.982				14439
17228	-36	11912	8.8	K5	17 46 01.608	0.08	5	71.529	-36 33 02.87	0.09	5	71.529				14440
17229	-23	13586	8.7	G5	46 03.818	0.04	4	70.605	-23 25 56.72	0.08	4	70.605				14441
17230	-35	11954	7.19	A0	46 07.934	0.06	4	70.758	-35 21 47.47	0.16	4	70.758		24181		14442
17231	-42	12510	8.0	M0	46 09.713	0.09	4	71.014	-42 35 26.54	0.19	4	71.014				2122
17232	+1	3516	8.5	G5	46 11.420	0.19	2	72.433	+1 10 45.39	0.00	2	72.433		24182		14443
17233	+20	3570	5.77	K0	17 46 15.972	--	1	69.308	+20 34 51.03	--	1	69.308	1465	24184	3962	31465
17234	-11	4460	8.5	K0	46 17.396	0.06	2	71.959	-11 19 34.93	0.21	2	71.959				14444
17235	-54	8513	7.8	G5	46 22.079	0.15	4	70.225	-54 42 59.80	0.14	4	70.225				14445
17236	-51	11172	8.5	K0	46 22.716	0.14	4	70.219	-51 06 21.13	0.34	4	70.219				2123
17237	-67	3373	7.9	K2	46 25.249	0.27	3	71.221	-67 35 38.36	0.03	3	71.221				19970
17238	-37	11907	3.25	K2	17 46 27.237	0.04	23	71.136	-37 01 45.00	0.07	23	71.136	669	24188	3964	30669
17239	-20	4879	8.1	K5	46 28.059	0.23	5	70.864	-20 48 58.11	0.18	5	70.864				14446
17240	-71	2186	9.1	K2	46 30.783	0.11	4	70.698	-71 09 51.01	0.17	4	70.698				19971
17241	-7	4508	8.5	K0	46 44.470	0.07	2	71.293	-7 46 12.13	0.19	2	71.293				14447
17242	-35	11964	7.8	K2	46 47.093	0.05	4	70.745	-35 08 15.65	0.30	4	70.745				14448
17243	+25	3353	5.34	K0	17 46 47.385	0.11	6	70.469	+25 38 16.36	0.11	6	70.469	3415	24199	3967	33415
17244	-39	11898	8.6	K2	46 48.309	0.08	4	71.039	-39 46 47.88	0.17	4	71.039				14449
17245	-62	5715	7.6	K2	46 51.259	0.15	4	70.741	-62 37 20.46	0.12	4	70.741				14450
17246	-24	13521	7.10	K0	46 53.796	0.05	4	69.488	-24 11 33.70	0.08	4	69.488		24202		14451
17247	-26	12402	8.1	F2	46 57.981	0.11	4	69.902	-26 47 48.50	0.11	4	69.902				14452
17248	-10	4557	8.5	G0	17 46 59.703	--	1	73.376	-10 27 37.62	--	1	73.376				14453
17249	-50	11573	7.46	M0	47 04.258	0.07	4	70.638	-50 16 39.28	0.07	4	70.638		24206		2124
17250	-46	11889	8.1	K0	47 05.501	0.16	4	71.326	-46 21 00.94	0.16	4	71.326				2125
17251	-12	4848	7.9	K0	47 06.808	--	1	73.395	-12 35 42.97	--	1	73.395				14454
17252	+4	3517	7.8	A5	47 07.185	0.00	2	72.816	+4 23 27.36	0.11	2	72.816				14455
17253	-14	4780	8.6	A0	17 47 18.058	--	1	73.294	-14 13 04.45	--	1	73.294				14456
17254	-38	12234	8.3	G5	47 20.593	0.13	4	70.865	-38 15 48.33	0.15	4	70.865				14457
17255	+3	3501	7.9	K5	47 21.201	0.25	2	72.170	+3 58 38.27	0.05	2	72.170				14458
17256	-59	7163	8.9	K0	47 41.574	0.12	4	69.797	-59 10 20.87	0.10	4	69.797				14459
17257	+9	3485	6.79	K5	47 47.107	0.06	23	70.724	+9 51 43.20	0.07	23	70.724	1466	24219	3969	31466
17258	-53	8816	8.6	K0	17 47 48.571	0.09	4	70.591	-53 03 39.19	0.12	4	70.591				14460
17259	-16	4629	8.8	A2	47 49.318	0.01	2	72.824	-16 08 28.53	0.01	2	72.824				14461
17260	-60	6954	8.5	K2	47 59.762	0.25	4	70.522	-60 48 30.35	0.11	4	70.522				14462
17261	-37	11936	8.2	K2	48 01.872	0.07	4	70.460	-37 25 52.11	0.20	4	70.460				14463
17262	-5	4509	8.2	A3	48 05.464	0.07	2	70.479	-5 19 02.03	0.17	2	70.479				14464
17263	-33	12543	8.7	K0	17 48 10.727	0.17	4	70.683	-33 59 48.70	0.05	4	70.683				14465
17264	-44	12134	9.21	G0	48 11.589	0.07	4	70.815	-44 19 24.70	0.18	4	70.815		24232		2126
17265	-31	14689	7.7	K0	48 21.177	0.10	4	70.139	-31 24 03.44	0.17	4	70.139				14466
17266	-32	13433	9.3	G5	48 46.194	0.11	4	70.376	-32 02 32.60	0.09	4	70.376				14467
17267	-25	12375	8.0	K0	48 49.019	0.09	4	69.965	-25 45 40.07	0.15	4	69.965				14468
17268	-21	4760	8.4	G5	17 48 50.136	0.09	4	68.957	-21 02 48.90	0.19	4	68.957				14469
17269	-6	4667	8.4	K5	48 54.718	0.21	2	72.091	-6 51 04.95	0.38	2	72.091				14470
17270	-49	11765	9.0	K0	48 57.010	0.20	4	69.972	-49 24 24.17	0.22	4	69.972				2127
17271	-68	2974	7.5	G5	49 00.645	0.14	4	69.430	-68 38 51.54	0.12	4	69.430				19972
17272	-4	4363	8.0	A0	49 06.219	0.03	2	72.012	-4 13 10.96	0.05	2	72.012				14471

17204 4.4m to 5.0m. F5 to G0.

17216 A 10795, 5.8m-7.8m, 0°6, 275°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17273	-11	4471	8.9	F8	17 49 10.212	0.27	2	72.105	-11 19 03.28	0.13	2	72.105				14472
17274	-14	4797	8.3	G5	49 12.517	0.27	2	71.474	-15 00 53.12	0.05	2	71.474				14473
17275	-9	4616	8.6	A3	49 15.336	0.29	2	72.020	-9 58 00.14	0.13	2	72.020				14474
17276	-29	14104	8.5	A2	49 15.339	0.11	4	69.915	-29 32 32.98	0.14	4	69.915				14475
17277	-66	3152	8.2	K0	49 22.002	0.11	4	70.461	-66 05 23.04	0.11	4	70.461				19973
17278	-1	3412	6.45	K0	17 49 24.244	0.09	5	69.410	-1 13 31.83	0.07	5	69.410	3418	24271	3974	33418
17279	-45	11982	9.0	K0	49 26.597	0.15	4	69.946	-45 45 19.47	0.05	4	69.946				2128
17280	-57	8777	8.5	K0	49 28.008	0.20	4	69.792	-57 58 42.44	0.13	4	69.792				14476
17281	-13	4776	8.8	K0	49 28.242	0.07	2	72.019	-13 38 43.40	0.38	2	72.019				14477
17282	-73	1865	8.7	G5	49 31.317	0.17	5	71.037	-73 45 54.79	0.07	5	71.037				19974
17283	+1	3526	6.78	K2	17 49 32.730	0.26	3	71.197	+1 07 21.02	0.48	2	72.151		24275		14478
17284	-2	4477	8.5	G5	49 42.047	0.13	2	71.499	-3 00 47.97	0.08	2	71.499				14479
17285	-24	13575	8.5	K5	49 51.264	0.07	4	69.005	-24 12 16.53	0.09	4	69.005				14480
17286	-71	2201	8.1	K0	49 51.498	0.01	4	70.222	-71 53 16.77	0.32	4	70.222				19975
17287	-0	3374	8.8	A3	49 59.318	0.09	2	69.974	-0 06 37.33	0.05	2	69.974				14481
17288	-43	12105	7.37	K0	17 50 01.972	0.10	4	70.364	-43 42 32.34	0.06	4	70.364		24291		2129
17289	-63	4170	7.70	K2	50 05.215	0.31	4	70.048	-63 15 58.85	0.21	4	70.048		24296		14482
17290	-70	2438	8.6	G5	50 08.550	0.21	4	70.294	-70 31 21.36	0.06	4	70.294				19976
17291	-52	10908	9.0	K2	50 10.933	0.13	4	69.868	-52 32 32.42	0.15	4	69.868				14483
17292	-28	13771	8.5	A0	50 11.778	0.07	4	70.191	-28 02 50.16	0.17	4	70.191				14484
17293	-22	4446	8.5	K0	17 50 12.337	0.08	4	69.829	-22 31 35.97	0.24	4	69.829				14485
17294	+4	3542	9.0	A3	50 16.611	0.08	2	70.446	+4 32 44.98	0.16	2	70.446				14486
17295	-10	4560	6.34	G5	50 16.809	0.38	2	70.546	-10 53 20.97	0.29	2	70.546		24301		14487
17296	-0	3375	8.5	A0	50 18.041	0.08	2	71.499	-0 01 39.04	0.53	2	71.499				14488
17297	-41	12151	8.3	K2	50 19.014	0.05	4	70.814	-41 09 57.56	0.08	4	70.814				2130
17298	-8	4517	8.4	A0	17 50 22.039	0.04	2	71.445	-8 51 02.94	0.05	2	71.445				14489
17299	-17	4941	8.8	K0	50 22.318	0.18	2	71.996	-17 28 25.41	0.13	2	71.996				14490
17300	-2	4480	8.2	K0	50 22.964	0.31	2	71.887	-2 14 50.43	0.07	2	71.887		24305		14491
17301	-18	4672	8.8	K0	50 25.290	0.00	2	70.444	-18 51 58.08	0.02	2	70.444		24306		14492
17302	-47	11895	8.82	K2	50 31.830	0.10	4	71.390	-47 25 03.16	0.27	4	71.390		24312		2131
17303	-33	12599	9.0	K2	17 50 45.451	0.21	4	69.974	-33 27 49.14	0.17	4	69.974				14493
17304	+6	3566	5.82	F5	50 47.799	0.13	6	69.253	+6 06 37.87	0.13	6	69.253	3420	24320		33420
17305	+2	3420	7.5	K0	50 48.522	0.12	2	72.011	+2 40 39.41	0.01	2	72.011				14494
17306	-67	3404	7.82	K0	50 53.402	0.19	4	70.705	-67 14 33.19	0.06	3	70.479		24323		19977
17307	-37	11969	7.9	K0	51 02.362	0.06	4	70.755	-37 26 28.56	0.10	4	70.755				14495
17308	-17	4946	8.9	K5	17 51 04.175	0.13	2	71.609	-17 24 12.00	0.09	2	71.609				14496
17309	-40	11965	8.5	K2	51 08.369	0.12	4	70.808	-40 14 39.75	0.21	4	70.808				2132
17310	-56	8492	8.6	K0	51 15.992	0.19	4	70.535	-56 17 25.62	0.10	4	70.535				14497
17311	-43	12119	8.0	K0	51 21.563	0.09	4	70.715	-43 08 52.69	0.10	4	70.715				2133
17312	-55	8364	9.1	K0	51 30.378	0.03	4	69.998	-55 42 32.09	0.08	4	69.998				14498
17313	+0	3805	8.6	K0	17 51 32.359	0.05	2	72.029	+0 42 29.98	0.14	2	72.029				14499
17314*	-32	13490	9.2	G0	51 32.800	0.05	4	70.749	-32 06 24.24	0.06	4	70.749				14500
17315	-4	4371	7.9	K5	51 37.268	0.22	2	72.030	-4 12 12.03	0.26	2	72.030				14501
17316	-77	1277	6.80	K0	51 37.513	0.10	6	69.947	-77 49 06.62	0.14	6	69.947	3421	24341		33421
17316 SP					51 37.592	0.11	5	71.433	-77 49 07.23	0.23	5	71.433	3421	24341		53421
17317	-3	4200	7.20	F5	17 51 51.988	0.22	2	72.176	-3 27 11.00	0.45	2	72.176		24348		14502
17318	+11	3283	6.26	F5	51 53.645	0.13	6	70.234	+11 08 25.44	0.14	6	70.234	3422	24349		33422
17319	-64	3711	8.15	K5	51 56.138	0.16	4	69.972	-64 47 54.00	0.10	4	69.972		24350		19978
17320	+3	3528	6.63	K2	51 58.889	0.13	2	72.146	+3 44 25.59	0.11	2	72.146		24352		14503
17321	-30	14925	8.2	K5	52 02.616	0.10	4	69.479	-30 35 35.84	0.24	4	69.479				14504
17322	-44	12188	8.17	K0	17 52 03.736	0.05	4	70.484	-44 55 20.59	0.19	4	70.484		24353		2134
17323	-65	3532	7.3	K5	52 07.828	0.06	5	70.976	-65 06 24.29	0.09	5	70.976				19979
17324	-34	12269	8.5	K5	52 10.649	0.06	4	70.946	-34 09 26.07	0.14	4	70.946				14505
17325	-7	4523	6.87	G5	52 14.932	0.02	97	71.597	-7 43 32.80	0.04	95	71.581	1467	24356	3980	81467
17326	-61	6079	8.5	K2	52 18.532	0.05	4	69.493	-61 26 02.79	0.12	4	69.493				14506
17327	-39	12009	7.8	K0	17 52 20.525	0.13	4	70.462	-39 20 22.86	0.08	4	70.462				14507
17328	-12	4870	9.0	A2	52 23.277	0.48	2	72.412	-12 03 39.69	0.63	2	72.412				14508
17329	-29	14196	8.4	A5	52 24.620	0.03	4	69.881	-29 58 12.62	0.13	4	69.881				14509
17330	-7	4524	8.3	A0	52 27.223	0.16	2	70.386	-7 27 52.40	0.15	2	70.386				14510
17331	-60	6969	7.92	K0	52 28.088	0.11	4	69.037	-60 19 04.84	0.24	4	69.037		24360		14511
17332	-47	11920	8.0	K0	17 52 38.588	0.10	4	70.644	-47 26 41.98	0.21	4	70.644				2135
17333	-88	150	8.7	K0	52 39.357	0.13	4	71.216	-88 48 00.44	0.11	4	71.216				19980
17333 SP					52 38.768	0.12	4	69.963	-88 48 00.48	0.13	4	69.963				19980
17334	-41	12201	9.1	K0	52 43.498	0.19	4	71.053	-41 03 10.70	0.13	4	71.053				2136
17335	+0	3807	8.3	G0	52 47.991	0.10	2	72.000	+0 40 27.05	0.12	2	72.000				14512
17336	-18	4686	6.40	A0	17 52 58.408	0.07	6	70.550	-18 47 42.97	0.13	6	70.550	3423	24369		33423
17337	-32	13517	6.62	Oe5	52 59.761	0.10	6	70.820	-32 28 06.61	0.11	6	70.820	3424	24371	3982	33424
17338	-38	12324	8.8	K5	53 01.106	0.09	4	70.638	-38 29 58.74	0.06	4	70.638				14513
17339	-31	14824	9.1	K0	53 04.661	0.05	3	70.318	-31 10 56.88	0.17	3	70.318				14514
17340	+2	3427	6.73	A3	53 06.138	0.01	2	70.435	+2 04 54.26	0.44	2	70.435		24373		14515
17341	-78	1152	7.3	K5	17 53 07.687	0.07	4	69.936	-78 22 36.99	0.18	4	69.936				19981
17341 SP					53 07.635	0.18	4	69.427	-78 22 37.06	0.16	4	69.427				19981
17342	-44	12201	4.98	K0	53 08.362	0.08	6	70.667	-44 20 09.62	0.16	6	70.667	3425	24374	3983	33425
17343	-25	12451	8.0	B9	53 09.293	0.04	4	69.941	-25 39 58.73	0.12	4	69.941				14516
17344	-26	12551	7.33	G0	53 16.975	0.12	4	69.995	-26 45 59.05	0.11	4	69.995		24376	3984	14517

17314 9.7m-10.5m, 0°9, 224°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
17345	-40	12000	7.52	K2	17 53 17.221	0.12	4	70.692	-40 22 45.88	0.14	4	70.692		24377		2137
17346	-21	4779	6.64	A0	53 20.577	0.09	4	70.053	-21 56 58.45	0.15	4	70.053		24380		14518
17347	+26	3120	5.48	F5p	53 24.061	0.13	7	71.436	+26 03 24.04	0.16	6	71.243	1468	24382	3985	31468
17348	-35	12084	7.6	B9	53 25.436	0.07	4	70.743	-35 11 43.56	0.08	4	70.743				14519
17349	-56	8506	6.54	B8	53 26.493	0.12	6	69.629	-56 53 26.71	0.22	6	69.629	3426	24385		33426
17350	+3	3533	8.4	K5	17 53 27.189	0.13	2	71.505	+3 44 44.31	0.59	2	71.505				14520
17351	-36	12034	8.6	K5	53 27.666	0.08	4	70.811	-36 39 23.19	0.12	4	70.811				14521
17352	-1	3419	8.7	M0	53 31.977	0.28	2	71.996	-1 24 13.50	0.21	2	71.996				14522
17353	-10	4565	8.6	G0	53 41.197	0.07	2	71.485	-10 10 57.98	0.05	2	71.485				14523
17354	+22	3237	5.69	K2	53 44.645	0.14	6	70.455	+22 28 14.03	0.18	6	70.455	3427	24392	3986	33427
17355	-6	4679	8.5	K2	17 53 46.834	0.10	2	71.945	-6 32 44.98	0.16	2	71.945				14524
17356	-15	4729	7.9	K0	53 55.509	0.14	2	71.024	-15 40 42.16	0.51	2	71.024		24395		14525
17357	-8	4529	8.2	G0	53 58.717	0.21	2	71.051	-8 00 30.46	0.11	2	71.051				14526
17358	-23	13678	6.85	K5	54 04.012	0.15	4	69.838	-23 56 02.06	0.05	4	69.838		24397	3988	14527
17359	-57	8809	9.0	G5	54 07.347	0.15	4	68.947	-57 47 17.85	0.05	4	68.947				14528
17360	-48	12179	8.5	K0	17 54 10.963	0.11	4	69.947	-48 17 08.83	0.13	4	69.947				2138
17361*	-55	8388	8.2	K0	54 14.353	0.06	4	68.963	-55 09 29.99	0.14	4	68.963				14529
17362	-13	4798	8.0	A3	54 17.049	0.22	2	69.943	-13 38 52.30	0.29	2	69.943				14530
17363	-16	4662	8.9	G0	54 19.766	0.01	2	69.943	-16 39 10.36	0.24	2	69.943				14531
17364	-25	12484	8.6	A2	54 29.348	0.04	4	70.779	-25 04 39.19	0.14	4	70.779				14532
17365	-19	4774	8.3	K0	17 54 36.339	0.23	2	69.981	-19 53 04.95	0.16	2	69.981				14533
17366	-28	13909	8.7	B9	54 40.078	0.13	4	70.021	-28 38 03.07	0.13	4	70.021				14534
17367	+4	3558	8.50	F5	54 51.853	0.15	2	69.938	+4 53 32.45	0.17	2	69.938		24420		14535
17368	-22	4469	8.7	K0	54 53.779	0.09	4	70.653	-22 58 17.24	0.16	4	70.653				14536
17369	-50	11656	9.0	F8	55 02.321	0.07	4	69.435	-50 50 07.65	0.08	4	69.435				2139
17370	-35	12113	8.0	K0	17 55 05.198	0.09	4	70.664	-35 03 45.22	0.19	4	70.664				14537
17371	-32	13564	8.5	K5	55 05.443	0.09	4	70.615	-32 54 20.51	0.07	4	70.615				14538
17372	-42	12686	8.3	K5	55 10.257	0.14	4	69.929	-42 43 35.15	0.07	4	69.929				2140
17373	-1	3426	8.4	K5	55 10.589	0.07	2	70.976	-1 45 38.95	0.36	2	70.976				14539
17374	+2	3436	6.71	A0	55 19.862	0.07	2	70.961	+2 15 27.19	0.18	2	70.961		24427		14540
17375	-81	799	6.32	K2	17 55 26.169	0.11	7	69.967	-81 29 12.04	0.41	6	69.752	3990	24431		33990
17375 SP					55 26.154	0.11	7	69.625	-81 29 12.02	0.12	7	69.625	3990	24431		53990
17376	-80	840	8.7	G5	55 26.518	0.16	4	70.393	-80 37 44.29	0.21	4	70.393				19982
17376 SP					55 26.665	0.23	4	69.953	-80 37 43.95	0.37	4	69.953				19982
17377	-66	3187	9.0	K0	55 34.377	0.09	4	70.079	-66 46 22.03	0.17	4	70.079				19983
17378	-52	10944	8.4	K0	17 55 35.161	0.16	4	69.455	-52 24 47.43	0.05	4	69.455				14541
17379	-69	2804	8.2	G5	55 36.151	0.06	4	70.640	-69 13 53.32	0.26	4	70.640				19984
17380	-26	12615	8.6	K0	55 42.492	0.18	4	70.723	-26 49 29.68	0.11	4	70.723				14542
17381	-59	7200	9.0	K2	55 45.952	0.12	4	70.035	-59 48 10.84	0.17	4	70.035				14543
17382	+3	3546	9.0	B8	55 46.566	0.01	2	69.968	+3 55 55.61	0.05	2	69.968				14544
17383	-16	4671	7.06	A5	17 55 48.097	0.01	2	70.987	-16 51 14.50	0.03	2	70.987		24446		14545
17384	+29	3156	3.82	K0	55 49.344	0.05	30	71.518	+29 15 06.84	0.08	28	71.489	674	24448	3995	30674
17385	-11	4498	8.6	K2	55 52.518	0.33	2	71.922	-11 52 13.90	0.43	2	71.922				14546
17386	-22	4474	6.92	B0	55 55.770	0.15	5	70.401	-22 50 52.13	0.06	5	70.401		24456		14547
17387	-53	8866	7.4	K0	56 01.952	0.15	4	70.013	-53 05 45.14	0.20	4	70.013				14548
17388	-0	3393	8.9	K5	17 56 05.030	0.04	2	71.955	-0 34 42.80	0.21	2	71.955				14549
17389	-5	4542	7.62	K2	56 05.763	0.07	2	71.955	-5 25 17.94	0.16	2	71.955			3998	14550
17390	-8	4536	8.8	A2	56 10.054	0.00	2	71.969	-8 56 14.76	0.17	2	71.969				14551
17391	-25	12526	8.2	B9	56 10.068	0.19	4	69.849	-25 48 57.72	0.17	4	69.849				14552
17392	-3	4212	8.8	A3	56 15.236	0.16	2	72.007	-3 30 43.09	0.13	2	72.007				14553
17393	-75	1403	7.97	A3	17 56 16.121	0.09	5	70.674	-75 41 19.65	0.12	4	70.532		24469		19985
17393 SP					56 16.107	0.19	4	69.641	-75 41 19.49	0.13	4	69.641		24469		19985
17394	-9	4632	3.50	K0	56 16.312	0.03	44	71.878	-9 46 11.53	0.04	43	71.842	673	24468	3999	30673
17395	+13	3495	9.1	A2	56 20.766	0.15	4	69.475	+13 53 12.49	0.14	4	69.475				27358
17396	-56	8533	9.0	K0	56 21.060	0.21	4	69.973	-56 21 00.73	0.12	4	69.973				14554
17397	-49	11852	7.76	F8	17 56 28.235	0.13	4	69.951	-49 54 53.53	0.06	4	69.951		24473		2141
17398	-27	12211	7.9	K5	56 28.682	0.18	4	71.100	-27 04 02.48	0.19	4	71.100				14555
17399	-21	4806	8.0	K0	56 32.196	0.09	4	70.019	-21 02 35.53	0.03	4	70.019				14556
17400	-74	1663	8.4	F8	56 33.386	0.03	4	69.432	-74 18 41.63	0.09	4	69.432				19986
17401	-30	15065	8.4	M0	56 37.047	0.07	4	70.931	-30 19 14.72	0.07	4	70.931				14557
17402	-13	4811	8.5	A5	17 56 39.152	0.05	2	70.071	-13 01 45.01	0.04	2	70.071				14558
17403	-23	13731	4.76	A0	56 44.280	0.11	6	68.832	-23 48 48.83	0.04	6	68.832	3430	24483		33430
17404	-51	11298	9.5	G0	57 00.518	0.24	4	69.926	-51 25 03.10	0.19	4	69.926				2142
17405	-29	14317	8.2	K5	57 03.017	0.15	4	70.311	-29 53 26.65	0.16	4	70.311				14559
17406	-38	12390	7.7	K0	57 04.704	0.22	4	70.393	-38 21 20.79	0.25	4	70.393				14560
17407	-35	12148	8.9	K0	17 57 07.551	0.08	4	70.416	-35 44 43.41	0.02	4	70.416				14561
17408	-33	12712	9.0	K5	57 13.983	0.08	4	70.695	-33 54 51.05	0.14	4	70.695				14562
17409	-36	12094	7.8	K0	57 15.131	0.11	5	70.541	-36 57 55.56	0.06	5	70.541				14563
17410	-37	12074	8.9	G5	57 23.280	0.24	3	70.505	-37 29 47.05	0.07	3	70.505				14564
17411	-54	8615	8.7	K5	57 25.514	0.06	4	69.488	-54 06 17.39	0.05	4	69.488				14565
17412	-34	12361	8.6	K0	17 57 25.942	0.03	4	70.699	-34 42 23.38	0.08	4	70.699				14566
17413	-19	4789	7.6	K5	57 27.650	0.28	3	71.188	-19 13 46.77	0.17	3	71.188				14567
17414	-14	4845	8.2	K0	57 29.788	0.08	2	72.181	-14 12 23.68	0.11	2	72.181				14568
17415	-45	12101	7.74	G5	57 29.933	0.07	4	70.471	-45 49 30.46	0.15	4	70.471		24496		2143
17416	-83	642	8.5	F8	57 35.709	0.08	4	70.319	-83 08 13.86	0.10	4	70.319				19987

17361 8.8m-9.1m, 0°4, 190°.

17377 10.6m, 3°6, 232°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
17416	SP				17 57 35.829	0.18	5	70.349	-83 08 13.31	0.25	4	70.412				19987
17417		- 6 4693	8.5	A0	57 42.307	0.21	2	72.979	- 6 36 53.51	0.08	2	72.979				14569
17418		+ 1 3556	7.7	K0	57 48.164	0.10	2	72.192	+ 1 36 41.18	0.02	2	72.192				14570
17419		+16 3335	4.71	K0	57 49.756	0.04	65	71.000	+16 45 08.09	0.05	65	71.000	1469	24502	4003	81469
17420		-35 12159	8.8	A0	57 50.709	0.25	4	71.405	-35 19 42.50	0.16	4	71.405				14571
17421		-60 6987	6.98	K0	17 57 52.586	0.15	6	70.314	-60 08 14.59	0.14	6	70.314	3431	24504		33431
17422		+ 2 3458	3.95	B5p	58 08.353	0.04	26	72.127	+ 2 55 56.56	0.08	25	72.109	677	24509	4004	30677
17423		-24 13753	8.5	K5	58 15.687	0.20	4	69.978	-24 37 54.89	0.16	4	69.978				14572
17424		- 2 4529	7.3	K0	58 20.398	0.05	2	71.955	- 2 34 41.42	0.18	2	71.955				14573
17425		- 6 4694	8.8	K0	58 21.434	0.19	2	72.188	- 6 06 06.49	0.22	2	72.188				14574
17426		- 2 4530	9.0	A0	17 58 22.603	0.08	2	71.986	- 2 02 03.79	0.32	2	71.986				14575
17427		-63 4241	8.8	K0	58 24.200	0.23	4	69.476	-63 14 44.82	0.13	4	69.476				14576
17428		+ 6 3597	6.18	B3	58 26.412	0.09	6	71.231	+ 6 16 07.65	0.17	6	71.231	3432	24515	4005	33432
17429		-44 12267	8.72	G5	58 27.496	0.17	4	70.799	-44 26 27.96	0.14	4	70.799		24516		2144
17430		-17 4987	6.31	K2	58 28.707	0.03	47	71.604	-17 09 24.20	0.05	46	71.564	1470	24517	4006	31470
17431		-31 14970	9.2	K5	17 58 36.303	0.19	5	70.586	-31 39 40.03	0.07	5	70.586				14577
17432		-46 12051	8.5	K0	58 37.134	0.16	4	70.514	-46 59 38.55	0.16	4	70.514				2145
17433		-53 8888	7.66	A2	58 39.789	0.02	4	69.386	-53 42 10.49	0.25	4	69.386		24521		14578
17434		-41 12320	9.0	K0	58 42.764	0.10	5	70.449	-41 24 53.17	0.09	5	70.449				2146
17435		-62 5777	8.0	G5	58 42.984	0.17	4	69.516	-62 08 06.98	0.16	4	69.516				14579
17436		+ 0 3837	8.0	G5	17 58 57.574	0.02	2	72.022	+ 0 06 15.67	0.05	2	72.022				14580
17437		-13 4833	8.2	A3	59 07.213	0.06	2	71.923	-13 08 52.08	0.24	2	71.923				14581
17438		+ 4 3572	8.7	K0	59 14.241	0.03	2	70.610	+ 4 40 37.88	0.06	2	70.610				14582
17439		-58 7322	8.4	G5	59 14.864	0.09	4	69.526	-58 18 16.26	0.10	4	69.526				14583
17440		-16 4690	8.8	F8	59 17.376	0.19	2	71.508	-16 13 34.65	0.10	2	71.508				14584
17441		-21 4823	8.6	K0	17 59 21.251	0.07	4	69.324	-21 57 51.27	0.15	4	69.324				14585
17442		-39 12151	8.57	K2	59 26.863	0.25	4	69.812	-39 20 18.22	0.21	4	69.812		24542		14586
17443		-20 4952	6.85	B3	59 38.229	0.09	4	69.872	-20 44 20.25	0.10	4	69.872		24548		14587
17444		-10 4588	8.7	F5	59 38.491	0.16	2	71.505	-10 06 49.56	0.05	2	71.505				14588
17445		-17 4997	8.2	F0	59 47.415	0.14	2	69.983	-17 31 26.10	0.07	2	69.983				14589
17446		-61 6100	9.0	G8	18 00 02.059	0.04	4	69.951	-61 28 57.67	0.13	4	69.951				14590
17447		-81 800	8.3	K2	00 02.838	0.09	4	70.334	-81 25 24.62	0.08	4	70.334				19988
17447	SP				00 03.005	0.16	4	69.999	-81 25 24.63	0.22	4	69.999				19988
17448		+ 3 3572	8.1	G5	00 04.007	0.08	2	70.972	+ 3 25 08.06	0.08	2	70.972				14591
17449		-52 10974	8.3	K0	00 04.562	0.06	4	70.459	-52 51 27.28	0.24	4	70.459				14592
17450		- 5 4560	6.61	A0	18 00 06.210	0.32	2	70.427	- 5 21 34.73	0.15	2	70.427		24561		14593
17451		-63 4265	8.6	K2	00 20.598	0.07	4	69.870	-63 44 44.07	0.07	4	69.870				14594
17452		-47 12024	7.74	K5	00 21.640	0.18	4	69.893	-47 43 22.46	0.05	4	69.893		24566		2147
17453		- 4 4388	8.5	K2	00 27.253	0.11	2	71.943	- 4 23 22.20	0.56	2	71.943				14595
17454		- 8 4550	8.5	A0	00 33.789	0.04	2	71.943	- 8 15 08.81	0.05	2	71.943				14596
17455		-65 3585	8.4	K5	18 00 38.626	0.09	4	70.910	-65 10 07.88	0.15	4	70.910				19989
17456		+ 1 3568	8.8	K5	00 39.135	0.13	2	71.964	+ 1 07 53.91	0.33	2	71.964				14597
17457		- 3 4231	8.5	A2	00 45.269	0.04	2	71.956	- 3 43 47.47	0.07	2	71.956				14598
17458		-22 4533	6.86	B0	00 53.967	0.07	4	70.951	-22 50 25.50	0.18	4	70.951		24578		14599
17459		-46 12073	9.1	G5	00 55.003	0.15	5	71.546	-46 24 23.88	0.18	5	71.546				2148
17460		+ 2 3473	8.3	A0	18 00 55.486	0.34	2	71.496	+ 2 30 43.36	0.40	2	71.496				14600
17461		-50 11703	8.1	K0	00 56.867	0.06	4	70.051	-50 26 39.13	0.14	4	70.051				2149
17462		-45 12153	8.0	K5	01 07.091	0.10	4	70.960	-45 35 14.35	0.06	4	70.960				2150
17463		-28 14089	8.8	A0	01 09.478	0.06	4	69.870	-28 26 01.30	0.17	4	69.870				14601
17464		-35 12229	5.82	K0	01 28.254	0.06	6	68.743	-35 54 18.03	0.10	6	68.743	3435	24597	4011	33435
17465		+ 1 3574	8.5	G5	18 01 30.020	0.22	2	70.578	+ 1 49 45.40	0.15	2	70.578		24598		14602
17466		-10 4598	7.7	G0	01 33.794	0.13	2	71.486	-10 54 51.12	0.24	2	71.486				14603
17467		-51 11343	9.0	K0	01 35.651	0.18	4	70.479	-51 15 48.66	0.20	4	70.479				2151
17468		-25 12669	7.01	F0	01 42.681	0.16	4	69.913	-25 36 34.83	0.36	4	69.913		24603		14604
17469		-56 8586	7.8	K2	01 49.354	0.11	4	70.728	-56 49 36.33	0.14	4	70.728				14605
17470		-60 6997	7.88	K5	18 01 54.337	0.08	4	70.798	-60 32 17.24	0.18	4	70.798		24611		14606
17471		-27 12360	8.4	K2	01 57.135	0.16	4	69.992	-27 07 42.76	0.06	4	69.992				14607
17472		-32 13706	8.5	K0	01 57.820	0.24	5	70.447	-32 15 50.70	0.07	5	70.447				14608
17473		-38 12460	8.6	K0	01 58.042	0.17	4	70.725	-38 23 09.79	0.24	4	70.725				14609
17474		-48 12270	8.5	K2	02 02.645	0.12	4	71.148	-48 23 21.63	0.33	4	71.148				2152
17475		-15 4808	8.5	G0	18 02 05.364	0.28	2	72.015	-15 17 33.85	0.27	2	72.015				14610
17476		- 6 4706	8.7	A2	02 17.526	0.04	2	71.992	- 6 21 17.80	0.22	2	71.992				14611
17477		-33 12810	8.9	G5	02 18.623	0.15	4	71.205	-33 18 58.09	0.11	4	71.205				14612
17478		-72 2176	8.9	G5	02 19.532	0.22	4	71.459	-72 21 01.13	0.17	4	71.459				19990
17479		- 9 4646	8.4	G0	02 26.033	0.09	2	71.275	- 9 34 57.65	0.08	2	71.275				14613
17480		-30 15214	9.0	K0	18 02 34.944	0.06	4	70.998	-30 38 39.78	0.12	4	70.998				14614
17481		-19 4832	6.79	B9	02 35.525	0.00	2	70.443	-19 45 32.92	0.26	2	70.443		24631		14615
17482		-30 15215	3.07	K0	02 35.584	0.03	100	70.953	-30 25 39.65	0.03	99	70.937	679	24632	4013	30679
17483		-35 12251	8.7	K5	02 39.458	0.17	3	71.226	-35 06 49.94	0.32	3	71.226				14616
17484		-37 12164	7.5	K0	02 39.733	0.08	4	71.136	-37 26 18.44	0.12	4	71.136				14617
17485		-50 11720	3.90	B1p	18 02 44.223	0.04	41	70.769	-50 05 49.64	0.04	41	70.769	1471	24635	4014	31471
17486		-59 7222	8.3	K5	02 48.123	0.15	4	70.765	-59 36 54.48	0.28	4	70.765				14618
17487		- 1 3444	8.5	K0	02 56.347	0.50	2	72.780	- 1 58 13.88	0.51	2	72.780				14619
17488		-49 11927	9.0	G5	02 56.543	0.20	2	70.188	-49 32 41.14	0.39	2	70.188				2153
17489		-43 12269	8.0	M0	02 58.929	0.08	4	71.136	-43 37 59.63	0.17	4	71.136				2154

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
17490	-5	4567	8.7	A0	18 02 59.931	0.28	2	72.974	-5 37 07.08	0.26	2	72.974				14620
17491	-42	12871	9.0	K0	03 01.857	0.17	3	71.241	-42 36 44.88	0.28	3	71.241				2155
17492	-70	2493	8.0	K0	03 07.766	0.15	4	69.987	-70 05 12.30	0.22	4	69.987				19991
17493	-14	4880	8.4	B0	03 08.155	0.03	2	72.349	-14 12 12.97	0.28	2	72.349				14621
17494	+4	3589	6.83	G0	03 09.193	0.17	2	71.283	+4 39 15.83	0.07	2	71.283		24647		14622
17495	-8	4556	6.97	F8	18 03 18.160	0.10	2	72.326	-8 06 53.30	0.04	2	72.326		24651		14623
17496	-12	4916	8.6	F5	03 18.303	--	1	72.667	-12 21 25.80	--	1	72.667				14624
17497	-31	15097	8.3	K2	03 20.368	0.15	4	71.076	-31 39 36.58	0.13	4	71.076				14625
17498	-8	4558	5.79	B8	03 23.859	0.08	7	71.003	-8 19 46.54	0.11	6	70.961	3436	24656		33436
17499	-40	12154	8.6	G5	03 24.939	0.09	6	71.976	-40 04 53.79	0.14	5	71.707				2156
17500	-23	13908	8.4	K0	18 03 30.387	0.08	4	70.720	-23 57 05.49	0.13	3	69.821				14626
17501	-0	3414	6.52	G5	03 33.172	0.09	2	70.000	-0 27 07.30	0.22	2	70.000		24659		14627
17502	-28	14144	7.33	A0	03 35.952	0.08	3	70.419	-28 22 12.33	0.17	3	70.419		24661		14629
17503	-63	4292	4.44	A5	03 45.946	0.09	6	71.175	-63 40 27.88	0.18	6	71.175	3437	24665	4017	33437
17504	-18	4789	7.83	A0	03 46.033	--	1	72.574	-18 59 25.99	--	1	72.574			4018	14631
17505	-38	12484	8.0	M0	18 03 54.413	0.16	5	70.823	-38 58 57.40	0.08	5	70.823				14633
17506	-64	3801	9.1	G5	03 56.907	0.09	4	71.707	-64 37 30.55	0.18	4	71.707				19992
17507	+2	3489	8.6	K0	03 58.066	--	1	73.414	+2 40 14.44	--	1	73.414				14634
17508	-36	12234	8.0	K0	04 00.562	0.25	4	71.082	-36 13 44.77	0.05	4	71.082				14635
17509	-54	8697	8.2	K2	04 02.670	0.14	4	70.770	-54 16 12.60	0.16	4	70.770				14636
17510	-43	12285	7.43	K0	18 04 03.373	0.10	4	70.744	-43 23 56.29	0.06	4	70.744		24674		2157
17511	-55	8503	7.12	K2	04 04.499	0.11	4	70.753	-55 41 55.18	0.21	4	70.753		24675		14637
17512	-68	3053	9.3	K5	04 06.764	0.05	4	71.412	-68 01 45.59	0.19	4	71.412				19993
17513	-21	4855	6.22	B1	04 11.334	0.07	5	71.021	-21 27 02.96	0.11	5	71.021	3438	24678	4021	33438
17514	-13	4852	8.6	A0	04 12.858	0.45	2	72.015	-13 14 33.72	0.15	2	72.015				14638
17515	-29	14516	8.5	K2	18 04 14.697	0.06	4	69.474	-29 28 58.42	0.17	4	69.474				14639
17516	-75	1410	5.69	K5	04 16.074	0.04	57	71.195	-75 53 54.87	0.05	56	71.194	678	24680	4022	30678
17516 SP					04 16.068	0.05	44	71.005	-75 53 54.94	0.09	44	71.005	678	24680	4022	50678
17517	-34	12485	9.1	K0	04 18.931	0.15	4	70.009	-34 08 25.25	0.13	4	70.009				14641
17518	-2	4549	8.4	G0	04 21.807	0.29	3	72.406	-2 08 05.43	0.20	3	72.406				14642
17519	-21	4861	8.13	K2	18 04 42.090	0.13	4	69.935	-21 52 05.05	0.03	4	69.935		24686		14643
17520	-16	4716	9.0	K0	04 50.762	0.08	2	71.963	-16 02 56.20	0.04	2	71.963				14644
17521	-17	5028	5.74	K0	04 54.159	0.11	2	70.464	-17 09 44.47	0.28	2	70.464		24692		14645
17522	-57	8891	7.7	K2	04 54.485	0.07	4	71.365	-57 47 42.43	0.12	4	71.365				14646
17523	-28	14174	4.66	K0	04 54.935	0.08	6	69.815	-28 27 52.89	0.11	6	69.815	3439	24694	4024	33439
17524	+9	3564	3.73	A3	18 04 58.569	0.03	79	71.148	+9 33 20.44	0.04	77	71.151	680	24695	4025	80680
17525	-45	12218	8.20	K2	05 03.391	0.07	4	69.972	-45 30 42.00	0.14	4	69.972		24697		2158
17526	+3	3597	7.7	K0	05 20.414	0.21	2	72.470	+3 41 11.46	0.21	2	72.470				14647
17527	-0	3421	8.8	G5	05 24.344	0.01	2	70.481	-0 47 45.22	0.26	2	70.481				14649
17528	-39	12265	7.4	M0	05 24.364	0.20	4	69.998	-39 30 10.97	0.19	4	69.998				14648
17529	-78	1161	8.9	K5	18 05 25.543	0.11	4	70.840	-78 32 04.31	0.17	4	70.840				19994
17529 SP					05 25.498	0.13	4	70.020	-78 32 04.02	0.20	4	70.020				19994
17530	-51	11382	8.2	K2	05 26.825	0.12	4	69.574	-51 04 47.08	0.08	4	69.574				2159
17531	+28	2925	4.1v	A0	05 35.423	0.23	11	71.072	+28 45 15.79	0.20	11	71.072	681	24711	4027	30681
17532	-26	12854	8.4	K5	05 42.538	0.13	4	69.859	-26 33 49.20	0.12	4	69.859				14650
17533	-20	5003	8.1	K0	18 05 43.365	0.16	4	71.064	-20 05 45.34	0.10	4	71.064				14651
17534	-27	12463	7.7	K0	05 45.172	0.10	4	72.386	-27 47 33.51	0.10	2	71.354				14652
17535	-25	12793	6.27	B8	05 48.452	0.15	4	70.224	-25 28 55.12	0.10	4	70.224		24719		14653
17536	-38	12518	7.6	G5	05 50.044	0.08	4	70.277	-38 37 12.69	0.16	4	70.277				14654
17537	-33	12875	8.8	K2	05 50.532	0.06	4	70.757	-33 19 33.14	0.03	4	70.757				14655
17538	-49	11957	9.2	K0	18 05 57.046	0.07	4	71.272	-49 17 31.01	0.17	4	71.272				2160
17539	-4	4405	8.0	K2	05 58.080	0.51	2	72.114	-4 26 57.15	0.15	2	72.114				14656
17540	-36	12265	6.58	B0	05 58.968	0.12	5	71.604	-36 40 54.38	0.13	5	71.604		24725		21150
17541	-46	12146	8.0	K0	05 59.006	0.27	4	70.582	-46 18 54.72	0.12	4	70.582				2161
17542	-47	12084	9.0	K2	06 02.928	0.07	4	70.826	-47 43 05.64	0.09	4	70.826				2162
17543	+0	3859	8.5	K2	18 06 03.847	0.18	2	71.338	+0 42 26.52	0.10	2	71.338				14657
17544	-36	12272	8.5	K5	06 12.092	0.10	6	71.184	-36 47 11.76	0.07	6	71.184				14658
17545	-24	13962	7.48	B0	06 14.179	0.07	4	70.138	-23 59 52.11	0.18	4	70.138		24732		14659
17546	-22	4585	8.4	K0	06 15.573	0.12	4	70.079	-22 54 50.87	0.18	4	70.079				14660
17547	+14	3427	6.30	A2	06 16.967	0.08	7	71.755	+14 16 32.49	0.23	5	71.687	3442	24734		33442
17548	-15	4834	8.7	K5	18 06 17.552	0.04	2	73.000	-15 04 06.20	0.13	2	73.000				14661
17549	+1	3604	6.90	F2	06 20.976	0.09	2	70.470	+1 59 09.97	0.34	2	70.470		24736		14662
17550	-37	12249	8.9	K0	06 29.231	0.15	4	70.987	-37 48 04.39	0.28	4	70.987				14663
17551	-24	13975	8.6	K5	06 36.893	0.02	4	70.136	-24 43 30.87	0.04	4	70.136				14664
17552	+20	3674	4.32	B3	06 37.073	0.15	6	70.701	+20 48 19.08	0.06	6	70.701	3443	24740	4034	33443
17553	-41	12480	8.4	K0	18 06 52.636	0.12	4	70.908	-41 45 58.88	0.14	4	70.908				2163
17554	-13	4863	6.50	K0	06 52.990	0.04	24	71.721	-13 56 40.28	0.06	24	71.721	1472	24750	4036	31472
17555	-8	4566	7.9	G5	06 56.783	0.30	2	70.555	-8 47 16.26	0.06	2	70.555				14665
17556	-52	11020	8.9	K0	06 57.675	0.13	4	68.896	-52 00 00.45	0.05	4	68.896				14666
17557	-11	4545	7.63	K2	06 57.722	0.04	2	72.029	-11 44 05.03	0.51	2	72.029		24752		14667
17558	-31	15188	7.7	K0	18 07 05.362	0.16	4	69.503	-31 32 35.17	0.10	4	69.503				14668
17559	-7	4568	8.9	G5	07 09.306	0.16	2	72.110	-7 55 26.24	0.22	2	72.110				14669
17560	-40	12229	9.2	G0	07 09.804	0.25	3	71.090	-40 33 03.47	0.03	3	71.090				2164
17561	-71	2268	9.1	K0	07 13.288	0.03	4	70.479	-71 35 01.49	0.14	4	70.479				19995
17562	-17	5045	8.8	K2	07 14.451	0.05	3	71.389	-17 44 35.33	0.88	3	71.389				14670

17551 4.1m to 4.2m.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17563	-48	12326	8.5	K0	18 07 14.523	0.02	5	71.193	-48 16' 46.49	0.20	5	71.193				2165
17564	-42	12959	9.0	G5	07 19.689	0.08	4	71.316	-42 24 09.64	0.25	4	71.316				2166
17565	-49	11968	8.9	K2	07 23.568	0.34	4	69.973	-49 59 08.61	0.15	4	69.973				2167
17566*	-35	12338	8.9	G5	07 24.805	0.10	4	71.237	-35 29 20.61	0.08	4	71.237				14671
17567	-45	12251	4.60	K0	07 30.965	0.03	82	70.989	-45 57 55.86	0.03	81	70.944	1473	24767	4040	31473
17568	-41	12491	5.90	A5	18 07 32.905	0.09	6	69.297	-41 22 12.51	0.10	6	69.297	3444	24769	4041	33444
17569	-44	12392	9.0	G0	07 32.932	0.14	4	70.441	-44 18 39.25	0.10	4	70.441				2168
17570	-58	7349	7.86	G5	07 33.848	0.13	4	71.070	-58 12 07.41	0.20	4	71.070		24770		14672
17571	+ 4	3627	8.5	F8	07 34.727	0.14	2	71.520	+ 4 47 40.64	0.38	2	71.520				14673
17572	-22	4597	8.1	G5	07 43.039	0.07	4	69.899	-22 15 02.96	0.15	4	69.899				14674
17573	-13	4869	8.8	K5	18 07 58.430	0.04	2	71.488	-13 00 10.07	0.04	2	71.488				14675
17574	-29	14610	7.9	G5	08 04.049	0.07	4	70.169	-29 39 04.40	0.14	4	70.169				14676
17575*	-76	1232	7.92	F2	08 09.903	0.14	4	69.487	-76 40 51.24	0.17	4	69.487		24782		19996
17575 SP					08 09.925	0.22	4	69.449	-76 40 51.47	0.24	4	69.449		24782		19996
17576	-55	8539	8.6	K0	08 10.135	0.18	4	70.014	-55 30 17.25	0.13	4	70.014				14677
17577	+ 3	3620	5.70	K0	18 08 10.348	0.08	6	70.900	+ 3 18 46.21	0.16	6	70.900	3445	24783		33445
17578	-67	3481	8.3	K5	08 10.976	0.04	4	70.554	-67 49 17.74	0.21	4	70.554				19997
17579	-15	4849	8.4	B8	08 17.912	0.09	2	71.480	-15 54 23.89	0.07	2	71.480				14678
17580	-34	12567	8.5	K0	08 32.539	0.12	4	70.629	-34 36 34.65	0.22	4	70.629				14679
17581	-70	2507	6.97	B9	08 39.123	0.06	6	69.250	-70 45 54.53	0.12	6	69.250	3446	24796		33446
17581 SP					18 08 39.052	0.13	24	71.669	-70 45 54.49	0.19	23	71.651	3446	24796		53446
17582	- 0	3434	7.8	K2	08 41.854	0.25	2	70.999	- 0 40 14.71	0.35	2	70.999				14680
17583	-55	8546	9.0	K2	08 57.049	0.16	4	70.737	-54 59 43.51	0.15	4	70.737				14681
17584*	-32	13861	8.5	G5	08 57.491	0.17	4	70.431	-32 17 39.98	0.17	4	70.431				14682
17585	+ 2	3524	8.2	K2	08 59.587	0.12	2	71.497	+ 2 09 11.69	0.20	2	71.497				14683
17586	- 9	4669	8.2	A0	18 09 02.017	0.18	2	71.992	- 9 33 33.79	0.07	2	71.992				14684
17587	- 2	4566	7.5	K0	09 04.042	0.23	2	71.925	- 2 44 18.84	0.25	2	71.925				14685
17588	-69	2848	9.0	K5	09 08.615	0.08	4	70.740	-69 45 20.35	0.13	4	70.740				19998
17589	-30	15381	8.0	G5	09 14.305	0.09	4	69.407	-30 01 37.52	0.03	4	69.407				14686
17590	- 8	4571	7.04	A5	09 17.355	0.04	2	70.588	- 8 44 37.31	0.27	2	70.588		24813		14687
17591	-19	4895	7.14	B2	18 09 17.370	0.06	2	72.007	-19 26 45.27	0.15	2	72.007		24812		14688
17592	-14	4928	8.7	F0	09 18.527	0.43	2	70.458	-14 01 14.79	0.09	2	70.458				14689
17593	-62	5808	8.4	K0	09 19.297	0.14	4	70.378	-62 57 31.18	0.09	4	70.378				14690
17594	-82	725	7.79	K5	09 23.064	0.10	4	69.915	-82 31 24.23	0.11	4	69.915		24815		19999
17594 SP					09 23.005	0.19	4	69.694	-82 31 23.94	0.12	4	69.694		24815		19999
17595	-76	1233	9.0	A2	18 09 25.984	0.11	4	70.441	-76 05 13.86	0.08	4	70.441				20000
17595 SP					09 25.917	0.22	4	69.543	-76 05 13.33	0.43	4	69.543				20000
17596	- 5	4590	8.5	A2	09 27.831	0.25	2	71.985	- 5 19 34.17	0.25	2	71.985				14691
17597	-66	3278	8.8	K0	09 29.882	0.11	3	69.855	-66 42 48.66	0.26	3	69.855				20001
17598	-10	4625	8.2	B0	09 38.220	0.01	2	70.485	-10 44 41.01	0.10	2	70.485				14692
17599	- 7	4571	7.1	G0	18 09 41.743	0.02	2	71.985	- 7 18 36.08	0.12	2	71.985				14693
17600	-16	4754	8.0	K2	09 54.638	0.14	2	71.399	-16 35 22.26	0.03	2	71.399				14694
17601	-58	7355	7.7	K0	09 56.430	0.14	4	69.940	-58 43 13.15	0.03	4	69.940				14695
17602*	-44	12422	9.0	K0	09 59.352	0.18	4	69.966	-44 30 51.38	0.13	4	69.966				2169
17603	-41	12544	6.97	K0	10 08.667	0.17	4	70.027	-41 08 26.88	0.15	4	70.027		24835		2170
17604	-39	12346	8.8	K0	18 10 12.297	0.07	4	70.740	-39 08 07.70	0.18	4	70.740				14696
17605	- 0	3440	8.9	F0	10 20.421	0.06	2	71.493	- 0 46 27.82	0.00	2	71.493				14697
17606	-62	5815	9.3	K2	10 22.819	0.20	4	69.733	-62 06 33.89	0.11	4	69.733				14698
17607	-14	4934	8.6	B8	10 23.183	0.44	2	70.491	-14 26 58.60	0.24	2	70.491				14699
17608	-42	13019	9.2	G5	10 24.460	0.08	4	70.468	-42 35 22.20	0.09	4	70.468				2171
17609	- 4	4415	6.57	A2	18 10 31.507	0.14	4	72.160	- 4 01 34.02	0.19	4	72.160	3450	24849		14700
17610	-24	14060	8.2	K5	10 32.042	0.13	4	69.492	-24 17 42.50	0.12	4	69.492				14701
17611	-60	7017	9.0	K0	10 33.254	0.11	5	70.900	-60 23 32.97	0.18	5	70.900				14702
17612	+ 2	3532	6.61	A2	10 33.519	0.07	2	72.116	+ 2 57 58.44	0.05	2	72.116		24850		14703
17613	+ 4	3652	8.6	K2	10 38.301	- -	1	71.707	+ 4 04 36.24	- -	1	71.707				14704
17614	-53	9011	8.0	K0	18 10 38.573	0.11	4	71.177	-53 05 36.99	0.25	4	71.177				14705
17615	- 1	3461	7.6	A0	10 40.243	0.01	2	72.189	- 1 44 02.45	0.28	2	72.189				14706
17616*	- 3	4254	8.2	F0	10 40.832	0.04	2	73.274	- 3 25 17.15	0.15	2	73.274				14707
17617	-21	4908	4.01	B8p	10 46.318	0.02	99	70.813	-21 04 25.38	0.03	97	70.780	682	24856	4047	80682
17618	-48	12366	7.48	K2	10 53.087	0.10	4	70.696	-48 49 43.60	0.19	4	70.696		24860		2172
17619	-58	7360	8.5	G5	18 10 56.060	0.09	4	70.036	-58 03 19.75	0.24	4	70.036				14708
17620	-37	12340	8.2	K0	11 02.605	0.18	5	71.312	-37 39 57.41	0.11	5	71.312				14709
17621	+ 0	3883	8.0	K0	11 10.396	0.31	2	72.425	+ 0 40 12.37	0.06	2	72.425		24870		14710
17622	-63	4346	9.0	K0	11 16.443	0.08	4	70.502	-63 18 12.96	0.25	4	70.502				14711
17623p	-80	847	7.30	K2	11 20.369	0.14	5	70.972	-80 15 30.15	0.08	5	70.972		24872		20002
17623 SP					18 11 20.360	0.16	4	69.452	-80 15 30.59	0.37	4	69.452		24872		20002
17624	+ 2	3537	6.61	K2	11 21.210	0.04	2	73.313	+ 2 22 41.24	0.28	2	73.313		24873		14712
17625	-28	14334	8.3	F8	11 27.375	0.10	4	70.426	-27 59 46.85	0.14	4	70.426				14713
17626	-50	11803	8.0	K5	11 29.074	0.12	4	70.544	-50 23 52.44	0.24	4	70.544				2173
17627	-18	4851	8.5	B8	11 29.817	0.10	2	70.455	-18 09 59.78	0.15	2	70.455				14714
17628	-10	4632	8.9	K5	18 11 36.394	0.10	3	71.492	-10 41 39.57	0.10	3	71.492				14715
17629	- 8	4574	8.9	F8	11 40.448	0.17	2	72.494	- 8 23 24.32	0.11	2	72.494				14716
17630	-40	12311	8.5	K0	11 43.465	0.13	4	70.812	-40 53 36.06	0.12	4	70.812				2174
17631	-35	12414	8.3	K2	11 50.712	0.10	5	71.040	-35 50 07.89	0.34	5	71.040				14717
17632	-34	12630	9.2	G5	11 57.170	0.12	4	70.531	-34 09 04.72	0.17	4	70.531				14718

17566 9.7m-9.8m, 0°2.

17575 SDS, 8.5m-8.8m, 2°1, 76°.

17584 SDS, 8.8m-10.0m, 1°3, 159°.

17602 SDS, 9.4m-9.7m, 0°5, 214°.

17616 8.9m-9.3m, 0°3, 78°.

17623 11.0m, 2°5, 27°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
17633	-2	4578	7.8	K5	18 11 59.877	0.10	2	72.001	-2 37 08.81	0.44	2	72.001				14719
17634	-20	5051	8.3	K0	12 02.962	0.09	4	70.720	-20 53 15.25	0.09	4	70.720				14720
17635	-25	12920	8.4	K5	12 05.570	0.07	4	70.325	-25 48 20.54	0.13	4	70.325				14722
17636	-15	4889	7.6	K0	12 05.592	0.04	2	70.484	-15 24 03.99	0.02	2	70.484				14721
17637	-49	12012	9.0	K0	12 10.525	0.09	4	70.692	-49 55 37.50	0.12	4	70.692				2175
17638	-20	5054	5.42	B0	18 12 13.872	0.03	6	72.394	-20 44 41.72	0.13	5	72.189		24893		21151
17639	-20	5055	6.02	B1	12 14.374	0.06	6	70.968	-20 24 16.76	0.08	6	70.968		24895		21152
17640	-6	4729	8.6	K5	12 22.554	0.04	2	71.515	-6 47 52.03	0.19	2	71.515				14723
17641	-12	4954	8.1	B0	12 24.640	0.13	2	70.439	-12 33 12.59	0.02	2	70.439				14724
17642	-43	12400	8.5	K0	12 30.590	0.16	4	69.977	-43 17 06.94	0.09	4	69.977				2176
17643	-18	4864	6.08	A2	18 12 34.421	0.08	6	70.833	-18 40 42.86	0.17	6	70.833		24900		21153
17644	-77	1292	8.7	M1	12 37.175	0.12	4	69.920	-77 41 30.69	0.09	4	69.920				20003
17644 SP					12 37.117	0.09	4	69.697	-77 41 29.97	0.10	4	69.697				20003
17645f	-68	3081	6.26	A0	12 40.166	0.07	6	70.256	-68 14 52.04	0.13	6	70.256	3452	24902	4050	33452
17646	-31	15317	8.2	K5	12 40.971	0.19	4	70.196	-31 46 34.46	0.27	4	70.196				14725
17647*	-73	1893	9.2	G0	18 12 41.761	0.05	4	70.714	-73 05 26.36	0.20	4	70.714				20004
17648	-33	13023	8.1	K5	12 47.522	0.10	4	70.467	-33 19 42.69	0.14	4	70.467				14726
17649	-36	12395	8.5	K0	12 49.166	0.20	4	70.756	-36 37 08.65	0.08	4	70.756				14727
17650	-35	12436	7.13	K2	12 52.312	0.13	4	70.645	-35 15 30.64	0.10	4	70.645		24904		14728
17651	-70	2522	9.1	K5	12 53.194	0.13	4	70.232	-70 45 06.35	0.09	4	70.232				20005
17652	-56	8706	5.54	B5	18 12 54.785	0.04	57	70.938	-56 02 29.26	0.04	56	70.872	1474	24906	4051	31474
17653	+0	3898	8.6	K2	12 57.846	0.16	2	71.527	+0 11 46.67	0.03	2	71.527				14729
17654	-51	11460	6.27	B9	13 04.555	0.11	6	69.717	-51 05 11.19	0.13	6	69.717	3453	24909		33453
17655	-13	4897	8.2	B2	13 04.943	0.04	2	71.650	-13 35 30.82	0.38	2	71.650				14730
17656	-11	4573	7.9	F5	13 17.714	0.01	2	70.443	-11 11 50.48	0.29	2	70.443				14731
17657	-51	11461	9.5	K0	18 13 21.547	0.06	4	69.964	-51 30 59.35	0.21	4	69.964				2177
17658	-59	7248	9.1	G5	13 22.433	0.06	4	70.625	-59 44 30.84	0.06	4	70.625				14732
17659	-56	8712	7.36	F0	13 36.386	0.08	4	70.066	-56 29 49.80	0.10	4	70.066		24915		14733
17660	-47	12181	8.5	K2	13 56.545	0.17	4	70.059	-47 08 04.34	0.11	4	70.059				2178
17661	-19	4945	8.2	G5	14 02.845	0.13	2	70.546	-19 05 40.94	0.22	2	70.546				14734
17662	-67	3510	8.17	K5	18 14 06.486	0.17	4	70.024	-67 20 53.90	0.13	4	70.024		24938		20006
17663	-10	4642	8.2	G0	14 08.308	0.08	2	71.963	-10 28 35.53	0.22	2	71.963				14735
17664	-22	4648	8.4	K5	14 08.687	0.09	4	70.556	-22 11 19.87	0.24	4	70.556				14736
17665	-84	573	6.54	A0	14 13.567	0.02	203	71.159	-84 24 46.30	0.03	199	71.128	3991	24942		63991
17665 SP					14 13.579	0.02	213	71.239	-84 24 46.35	0.03	206	71.214	3991	24942		73991
17666p	-36	12423	3.16	M3	18 14 14.328	0.04	39	71.289	-36 46 46.85	0.05	37	71.233	683	24944	4055	30683
17667	-3	4263	6.11	G5	14 15.784	0.17	2	70.470	-3 01 26.53	0.35	2	70.470				14737
17668	-30	15494	9.1	K5	14 16.308	0.07	4	69.423	-30 01 13.15	0.15	4	69.423				14738
17669	-17	5112	5.98	K5	14 16.996	0.19	4	70.713	-17 23 34.58	0.14	4	70.713	3454	24946	4056	14740
17670	-27	12668	8.7	K5	14 16.997	0.08	4	70.650	-27 31 00.59	0.11	4	70.650				14739
17671	-7	4580	8.2	A2	18 14 27.438	0.19	2	71.978	-7 14 14.96	0.10	2	71.978				14741
17672	-52	11061	7.73	G0	14 31.952	0.15	4	69.464	-52 46 20.67	0.19	4	69.464		24948		14742
17673	+0	3907	6.60	F0	14 32.231	0.25	2	71.984	+0 59 12.11	0.06	2	71.984		24949		14743
17674	-74	1677	8.8	A0	14 32.462	0.08	4	69.357	-74 41 40.16	0.11	4	69.357				20007
17675	+4	3682	8.7	K5	14 34.282	0.04	2	70.502	+4 54 25.20	0.05	2	70.502				14744
17676	-32	13974	8.4	K0	18 14 35.678	0.10	4	70.494	-32 14 20.65	0.13	4	70.494				14745
17677	-9	4678	6.30	A5	14 38.890	0.04	27	71.484	-9 46 39.38	0.08	27	71.484	1475	24952	4059	31475
17678	-14	4971	8.8	A0	14 40.145	0.10	2	72.895	-14 28 19.18	-	1	72.372				14746
17679	-71	2291	8.1	K5	14 41.874	0.09	4	70.963	-71 56 39.30	0.18	4	70.963				20008
17680	-27	12682	7.5	M0	14 43.323	0.15	4	69.460	-27 22 27.98	0.08	4	69.460				14747
17681	+2	3550	8.9	A0	18 14 43.895	0.07	3	72.439	+2 56 03.38	0.36	3	72.439				14748
17682	-5	4618	8.5	B9	14 47.292	0.10	2	72.843	-5 31 54.49	0.29	2	72.843				14749
17683	-61	6128	8.8	K5	14 48.511	0.09	4	70.449	-61 49 33.53	0.25	4	70.449				14750
17684	-38	12667	7.8	K2	14 49.213	0.09	4	70.315	-38 14 59.13	0.04	4	70.315				14751
17685	-1	3465	8.9	K2	14 49.670	0.22	2	72.828	-1 14 22.64	0.12	2	72.828				14752
17686	-12	4971	8.8	K0	18 14 58.765	0.11	2	71.621	-12 17 00.65	0.20	2	71.621				14753
17687	-1	3468	7.5	A2	15 07.329	0.07	2	72.001	-1 29 03.07	0.49	2	72.001			4060	14754
17688	-30	15514	8.7	K5	15 09.164	0.10	4	70.173	-30 43 52.17	0.17	4	70.173				14755
17689	-12	4974	7.6	A0	15 09.254	0.01	2	72.899	-12 53 24.88	-	1	72.378				14756
17690	-45	12378	8.5	G5	15 13.829	0.19	4	70.812	-45 29 13.87	0.07	4	70.812				2179
17691	-37	12418	7.49	K0	18 15 14.764	0.12	4	70.372	-37 14 41.59	0.20	4	70.372		24967		14757
17692	-40	12368	8.0	G5	15 22.521	0.10	4	70.704	-40 27 41.34	0.13	4	70.704				2180
17693	-8	4583	7.2	K0	15 24.569	0.27	2	72.191	-8 39 14.43	0.35	2	72.191				14758
17694	-18	4895	8.0	K5	15 26.654	0.15	2	72.055	-18 29 46.38	0.07	2	72.055				14759
17695	-25	12994	8.4	K2	15 35.756	0.06	4	70.002	-25 57 22.07	0.16	4	70.002				14760
17696	+13	3593	6.18	B5	18 15 45.493	0.07	6	69.891	+13 45 23.48	0.11	6	69.891	3456	24977	4063	33456
17697	-23	14212	8.5	K0	15 49.677	0.12	4	71.171	-23 05 14.62	0.09	4	71.171				14761
17698	-6	4737	8.6	A3	15 52.056	0.01	2	72.004	-6 07 43.40	0.23	2	72.004				14762
17699	-39	12452	8.3	G5	15 54.169	0.20	4	70.454	-39 41 53.17	0.13	4	70.454				14763
17700	+2	3559	7.6	K0	15 56.224	0.18	2	71.982	+2 56 25.29	0.41	2	71.982				14764
17701*	-46	12292	8.5	G5	18 15 58.468	0.12	4	71.093	-46 29 42.70	0.15	4	71.093				2181
17702	-13	4931	8.4	K5	16 05.201	0.06	2	70.413	-13 33 45.00	0.09	2	70.413				14765
17703	+4	3697	8.6	K2	16 06.359	0.25	2	71.963	+4 08 27.99	0.06	2	71.963				14766
17704	-56	8736	8.9	K0	16 13.299	0.20	4	70.780	-56 47 01.79	0.15	4	70.780				14767
17705	-53	9061	8.6	K0	16 16.269	0.05	4	70.211	-53 04 34.85	0.20	4	70.211				14768

17645 SD8, 9.8m, 2°3, 296°.
17647 9.4m-9.4m, 0°7, 42°.

17666 SD8, 9.2m, 3°7, 105°.
17701 8.6m-11.0m, 1°0, 293°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17706	- 4 4438	7.60	K0	18 16 20.661	0.08	2	70.067	- 4 07 36.55	0.18	2	70.067			4065	14769
17707	-54 8828	8.7	G5	16 21.581	0.11	4	70.289	-54 03 58.68	0.25	4	70.289				14770
17708	-73 1898	9.2	G5	16 28.666	0.07	4	70.248	-73 26 18.44	0.19	4	70.248				20009
17709	-29 14809	8.2	K0	16 30.424	0.09	4	69.941	-29 38 30.58	0.24	4	69.941				14771
17710	-48 12427	8.0	K2	16 31.488	0.08	4	70.722	-48 32 31.40	0.22	4	70.722				2182
17711	- 9 4690	8.5	F8	18 16 42.875	0.18	2	70.000	- 9 50 13.72	0.06	2	70.000				14772
17712	-44 12514	7.28	M3	16 50.135	0.06	4	70.075	-44 05 57.90	0.10	4	70.075	24998			2183
17713	-10 4651	8.2	*	16 50.504	0.01	2	71.507	-10 57 20.64	0.39	2	71.507				14773
17714	+ 0 3918	7.86	K5	16 52.864	0.23	2	69.980	+ 0 49 11.75	0.01	2	69.980			4066	14774
17715	-36 12474	7.7	K2	16 57.403	0.19	4	70.134	-36 27 06.92	0.06	4	70.134				14775
17716	-74 1679	8.7	K5	18 17 00.417	0.13	4	71.313	-74 04 47.26	0.13	4	71.313				20010
17717	+24 3381	5.49	K5	17 07.136	0.05	6	68.977	+24 25 26.45	0.19	6	68.977	3457	25003	4069	33457
17718	-41 12675	9.0	G5	17 12.689	0.14	4	71.035	-41 22 09.76	0.04	4	71.035				2184
17719	-66 3321	9.0	F8	17 26.154	0.05	4	71.684	-66 07 44.69	0.11	3	71.106				20011
17720	-79 952	7.33	M0	17 28.179	0.23	4	70.085	-79 57 13.38	0.22	4	70.085		25016		20012
17720 SP				18 17 28.193	0.08	4	69.529	-79 57 13.90	0.36	4	69.529		25016		14776
17721	-30 15559	8.7	K5	17 30.121	0.19	4	70.442	-30 08 43.79	0.12	4	70.442				14777
17722	-55 8626	9.0	K2	17 35.699	0.17	4	71.121	-55 27 25.78	0.27	4	71.121				14777
17723	-29 14834	2.84	K0	17 47.586	0.04	26	70.867	-29 51 05.07	0.05	26	70.867	687	25024	4070	80687
17724	-28 14476	8.7	K2	17 48.436	0.12	4	70.886	-28 43 50.31	0.17	4	70.886				14778
17725	-19 4969	8.9	A0	18 17 54.028	0.15	2	72.125	-19 57 17.02	0.57	2	72.125				14779
17726	-51 11509	8.5	F0	18 04.734	0.19	4	71.115	-51 27 02.87	0.11	4	71.115				2185
17727	-34 12740	9.0	G0	18 05.877	0.27	4	70.682	-34 46 01.47	0.33	3	69.769				14780
17728	-26 13068	6.69	A3	18 06.016	0.19	4	71.083	-26 06 32.66	0.12	4	71.083		25031		14781
17729	-57 8998	9.1	G5	18 07.057	0.09	4	71.600	-57 31 07.72	0.08	4	71.600				14782
17730	-47 12228	8.5	K0	18 08.667	0.10	4	71.125	-47 44 53.20	0.11	4	71.125				2186
17731	- 0 3465	8.5	A2	18 11.618	0.45	2	73.008	- 0 27 10.73	0.10	2	73.008				14784
17732	-64 3881	8.5	A0	18 12.011	0.11	4	70.804	-64 24 11.55	0.09	4	70.804				20013
17733	-33 13113	7.6	K5	18 16.482	0.17	4	71.041	-33 33 15.60	0.10	4	71.041				14785
17734	-32 14056	9.0	K7	18 19.297	0.16	3	71.053	-32 01 07.12	0.05	3	71.053				14786
17735	+ 3 3680	4.92	G5	18 18 22.207	0.07	13	70.511	+ 3 21 11.73	0.09	13	70.511	1476	25036	4074	31476
17736	-46 12321	9.0	G5	18 24.276	0.33	2	70.184	-46 03 34.92	0.14	2	70.184				2187
17737	-24 14219	6.36	M2	18 26.631	0.16	3	70.520	-24 56 22.10	0.23	2	69.072		25039		14787
17738	-35 12529	8.0	K2	18 30.340	0.09	4	71.141	-35 04 18.15	0.11	4	71.141				14788
17739p	-61 6140	4.25	K2	18 37.193	0.07	15	70.996	-61 31 09.58	0.06	15	70.996	686	25045	4075	30686
17740	- 2 4599	3.42	K0	18 42.528	0.25	4	70.210	- 2 55 02.28	0.13	4	70.210	688	25046	4076	30688
17741	-42 13165	7.97	K2	18 46.129	0.16	4	71.328	-42 57 33.84	0.23	4	71.328		25048		2188
17742	-38 12730	7.6	K0	18 51.829	0.08	4	70.709	-38 34 12.58	0.13	4	70.709				14792
17743	-50 11880	8.0	K5	18 56.952	0.14	4	71.008	-50 54 22.97	0.19	4	71.008				2189
17744	-22 4693	7.06	B8	19 01.088	0.00	3	70.618	-22 56 47.64	0.09	3	70.618		25055	4078	14794
17745	-11 4606	7.7	G5	18 19 01.972	0.00	1	69.281	-11 56 48.72	--	1	69.281				14795
17746	-63 4398	7.9	K0	19 06.407	0.10	4	70.649	-63 24 41.28	0.06	4	70.649				14796
17747	-32 14068	8.6	M1	19 08.985	0.05	2	70.062	-32 14 22.11	0.09	2	70.062				14797
17748	-24 14244	8.9	B8	19 09.213	0.26	3	70.427	-24 55 50.28	0.28	3	70.427				14798
17749	-42 13173	7.74	K2	19 12.247	0.11	4	70.345	-42 37 36.42	0.11	4	70.345		25059		2190
17750	- 7 4589	6.91	B9	18 19 28.304	--	1	69.360	- 7 31 26.78	--	1	69.360		25065		14800
17751	+ 0 3923	7.8	K5	19 34.809	--	1	72.296	+ 0 07 58.83	--	1	72.296				14801
17752	+ 4 3717	8.8	A3	19 39.946	--	1	72.326	+ 4 26 43.71	--	1	72.326				14802
17753	-65 3684	8.3	K0	19 41.614	0.28	4	70.492	-65 26 48.46	0.32	4	70.492				20014
17754	-58 7382	8.5	K5	19 52.171	0.11	4	71.200	-58 32 48.23	0.14	4	71.200				14803
17755	-28 14520	8.5	K2	18 20 04.872	0.05	4	70.520	-28 26 17.09	0.09	4	70.520				14804
17756	-17 5171	8.6	A0	20 05.943	0.47	2	71.954	-17 42 11.74	0.37	2	71.954				14805
17757	-45 12448	8.2	K0	20 17.154	0.11	3	70.169	-45 09 51.38	0.21	3	70.169				2191
17758	-20 5118	8.4	M0	20 21.052	0.13	4	70.929	-20 40 48.40	0.13	4	70.929				14806
17759	-12 5024	5.73	B8	20 24.224	0.12	6	70.940	-12 02 27.75	0.07	6	70.940	3459	25090		33459
17760	-55 8658	7.46	K2	18 20 30.156	0.06	4	69.997	-54 59 04.08	0.06	4	69.997		25091		14807
17761	-62 5853	7.9	F2	20 31.811	0.10	5	70.470	-62 31 45.63	0.16	5	70.470				14808
17762	-21 4974	8.2	K5	20 34.686	0.10	4	70.518	-21 41 26.83	0.23	4	70.518				14809
17763	-52 11087	7.6	K0	20 36.026	0.24	4	71.455	-52 08 06.17	0.11	4	71.455				14810
17764	+17 3555	5.48	K0	20 36.474	0.09	6	70.541	+17 48 00.91	0.16	6	70.541	3460	25093		33460
17765	-44 12569	5.42	B3	18 20 39.954	0.10	6	69.686	-44 08 14.31	0.13	6	69.686	3461	25094	4083	33461
17766	-30 15639	9.3	G0	20 42.927	0.08	4	72.000	-30 20 38.37	0.22	4	72.000				14811
17767	-34 12784	1.95	A0	20 51.091	0.04	55	71.047	-34 24 39.40	0.04	55	71.047	689	25100	4084	30689
17768	- 6 4751	8.1	F8	20 53.917	0.13	2	70.483	- 6 16 39.63	0.21	2	70.483				14812
17769	-66 3339	8.8	K2	20 54.306	0.08	4	70.678	-66 41 08.14	0.12	4	70.678				20015
17770	-78 1168	7.9	K2	18 20 58.105	0.39	5	70.638	-78 38 19.52	0.29	5	70.638				20016
17770 SP				20 57.738	0.57	4	69.449	-78 38 19.14	0.32	4	69.449				20016
17771	-26 13114	7.8	K2	21 03.157	0.23	4	70.762	-26 28 29.40	0.28	3	69.877				14813
17772	-77 1298	6.72	K0	21 04.170	0.10	6	69.008	-77 23 44.88	0.17	6	69.008	3462	25107		33462
17772 SP				21 04.237	0.08	6	68.916	-77 23 44.52	0.19	6	68.916	3462	25107		53462
17773	-60 7036	8.2	K2	18 21 04.869	0.15	4	69.506	-60 08 05.84	0.13	4	69.506				14814
17774	-54 8871	8.8	K2	21 14.966	0.08	4	70.033	-54 04 02.05	0.18	4	70.033				14815
17775	-38 12772	7.7	M0	21 30.906	0.11	4	70.312	-38 36 11.86	0.12	4	70.312				14816
17776	+ 1 3663	8.4	F5	21 31.935	0.02	2	69.961	+ 1 28 18.95	0.49	2	69.961				14817
17777	+21 3411	3.92	K0	21 34.241	0.04	57	71.173	+21 44 39.24	0.06	58	71.176	690	25116	4086	80690

17713 G5+A5.

17739 SDS, 8.6m, 3°5, 154°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17778	-4	4459	7.5	A3	18 21 38.841	0.21	2	71.550	-4 06 58.55	0.05	2	71.550				14818
17779	-19	4992	8.0	K5	21 40.699	0.08	2	72.016	-19 45 39.12	0.07	2	72.016				14819
17780	-10	4684	8.4	K2	21 43.655	0.24	2	72.014	-10 26 31.53	0.04	2	72.014				14820
17781	+3	3698	8.9	A2	21 46.249	0.01	2	70.623	+3 36 47.68	0.04	2	70.623				14821
17782	-49	12115	8.1	K0	21 48.352	0.03	4	70.979	-49 44 07.84	0.13	4	70.979				2192
17783	-1	3482	7.8	G0	18 21 48.512	0.19	2	72.003	-1 05 28.79	0.05	2	72.003				14822
17784	-5	4652	8.3	K2	21 51.449	--	1	72.664	-5 01 21.27	--	1	72.664				14824
17785	-39	12576	9.0	K0	21 55.205	0.08	4	70.095	-39 32 05.01	0.05	4	70.095				14825
17786	-3	4279	8.3	A2	21 58.258	--	1	69.360	-3 04 59.77	--	1	69.360				14826
17787	-24	14296	8.6	B9	22 00.863	0.11	4	69.484	-24 26 34.72	0.12	4	69.484				14827
17788	-11	4626	8.8	A3	18 22 01.010	--	1	72.563	-11 23 33.12	--	1	72.563				14828
17789	-18	4953	7.9	M2	22 03.780	--	1	72.667	-18 34 01.85	--	1	72.667				14829
17790	-61	6147	7.8	K5	22 13.490	0.13	5	70.760	-61 18 47.00	0.24	5	70.760				14830
17791	-2	4615	8.5	A0	22 16.823	--	1	70.619	-2 03 35.25	--	1	70.619				14831
17792	-68	3116	9.1	G5	22 21.941	0.26	3	70.553	-68 36 39.80	0.13	3	70.553				20017
17793	-14	5039	6.84	B0	18 22 24.847	0.08	2	72.454	-14 00 26.43	0.21	2	72.454	25133			14832
17794	-31	15506	8.5	K5	22 29.711	0.11	4	70.124	-31 31 49.92	0.07	4	70.124				14833
17795	-35	12591	8.9	K5	22 29.723	0.18	4	71.001	-35 29 55.91	0.14	4	71.001				14834
17796	-46	12371	8.0	K0	22 33.865	0.16	5	71.362	-46 59 07.93	0.11	5	71.362				2193
17797	-27	12824	8.5	K0	22 36.663	0.09	4	70.728	-27 28 12.77	0.14	4	70.728				14835
17798	+3	3705	7.8	K0	18 22 36.867	0.18	2	72.114	+3 28 20.12	0.23	2	72.114				14836
17799	-34	12801	9.0	G5	22 37.369	0.19	4	71.092	-34 24 15.13	0.20	4	71.092				14837
17800	-69	2889	8.15	K0	22 37.599	0.22	5	70.931	-69 20 41.96	0.13	5	70.931	25139			20018
17801	-23	14351	8.0	K0	22 41.816	0.13	4	69.481	-23 06 36.99	0.18	4	69.481				14838
17802	-64	3905	8.5	K0	22 44.019	0.14	4	70.678	-64 41 52.32	0.13	4	70.678				20019
17803	-15	4965	8.4	K0	18 22 45.805	0.09	2	72.044	-15 10 55.46	0.16	2	72.044				14839
17804	-51	11563	8.4	K2	22 55.158	0.22	4	70.710	-51 34 46.45	0.30	4	70.710				2194
17805	-33	13203	8.7	G5	22 56.059	0.09	4	70.216	-33 12 56.29	0.11	4	70.216				14841
17806	-9	4729	8.4	B	22 57.941	0.02	2	72.034	-9 46 56.93	0.28	2	72.034				14842
17807	+7	3682	5.69	*	23 14.384	0.04	45	71.615	+8 00 08.62	0.06	43	71.599	1478	25153	4090	31478
17808	-46	12379	3.76	B3	18 23 15.928	0.03	90	71.151	-45 59 54.70	0.03	90	71.129	691	25154	4091	30691
17809	+1	3668	8.8	K0	23 15.980	0.04	2	73.417	+1 19 28.58	--	1	73.414				14843
17810	-32	14145	8.4	K0	23 18.435	0.17	4	70.510	-32 48 19.27	0.11	4	70.510				14844
17811	+1	3669	8.7	K5	23 18.702	0.09	2	71.352	+1 59 30.89	--	1	69.286				14845
17812	-42	13257	9.0	G5	23 20.480	0.11	4	70.407	-42 42 36.57	0.08	4	70.407				2195
17813	-7	4603	8.3	K2	18 23 47.719	0.24	2	71.967	-7 09 26.69	0.49	2	71.967				14846
17814	-29	14952	8.5	A0	23 53.867	0.12	4	69.493	-29 32 21.00	0.16	4	69.493				14847
17815	-11	4631	8.4	B2	23 55.535	0.11	2	70.496	-11 23 15.17	0.14	2	70.496				14848
17816	-0	3484	8.4	F5	24 01.721	0.12	2	70.495	-0 12 57.42	0.24	2	70.495				14849
17817	+29	3259	5.71	A2	24 03.012	0.12	10	70.454	+29 47 55.38	0.10	10	70.454	1479	25165	4092	31479
17818	-65	3710	7.7	G0	18 24 04.242	0.08	4	71.548	-65 13 14.61	0.18	4	71.548				20020
17819	-17	5197	8.6	K5	24 11.087	0.13	2	70.632	-17 21 19.60	0.04	2	70.632				14850
17820	-60	7042	8.2	K2	24 17.679	0.23	4	70.647	-60 38 30.49	0.26	4	70.647				14851
17821	-18	4969	8.7	K2	24 21.356	0.16	2	70.975	-18 24 21.65	0.33	2	70.975				14852
17822	-36	12645	8.4	K0	24 23.953	0.27	4	70.078	-36 31 02.99	0.04	4	70.078				14853
17823	-8	4610	8.7	K0	18 24 24.575	0.29	2	71.402	-8 54 35.12	0.37	2	71.402				14854
17824	-49	12147	8.1	K0	24 24.793	0.09	5	71.088	-49 33 03.39	0.13	4	70.956				2196
17825	-1	3492	8.8	F0	24 34.189	0.08	2	72.922	-1 30 05.60	0.12	2	72.922				14855
17826	-57	9054	8.9	F8	24 36.037	0.10	4	70.363	-57 10 25.68	0.15	4	70.363				14856
17827	-43	12554	8.89	K0	24 36.090	0.16	4	70.755	-43 40 01.36	0.29	4	70.755	25173			2197
17828	-53	9146	7.5	K2	18 24 36.189	0.10	4	70.221	-53 52 56.96	0.21	4	70.221				14857
17829	-68	3125	8.4	K2	24 39.607	0.06	4	70.317	-68 52 08.92	0.10	4	70.317				20021
17830	-46	12391	9.0	K2	24 44.257	0.07	4	70.975	-46 24 24.42	0.13	4	70.975				2198
17831	-25	13149	2.94	K0	24 52.979	0.03	67	71.076	-25 27 08.13	0.04	63	70.968	692	25180	4095	30692
17832	-40	12523	9.0	K2	24 54.532	0.18	5	71.468	-40 17 28.91	0.11	5	71.468				2199
17833	-35	12635	9.0	A2	18 24 58.212	0.09	4	71.161	-35 22 18.44	0.22	4	71.161				14858
17834	-26	13192	6.28	A3	24 58.892	0.07	4	70.057	-26 47 20.81	0.18	4	70.057	25184	4097		14859
17835	-17	5203	6.03	B8	25 01.333	0.09	2	71.970	-17 49 56.80	0.24	2	71.970	25186			14860
17836	+2	3598	8.1	G0	25 06.084	0.14	2	70.521	+2 21 03.48	0.13	2	70.521				14861
17837	-20	5147	8.8	B9	25 09.449	0.09	4	71.017	-20 50 03.10	0.16	4	71.017				14862
17838	-21	5013	8.8	M2	18 25 10.531	0.13	4	70.316	-21 16 15.81	0.08	4	70.316				14863
17839	-36	12670	8.7	K5	25 10.846	0.08	3	70.798	-36 11 56.05	0.12	3	70.798				14864
17840	-41	12829	8.0	K2	25 11.164	0.15	4	70.800	-41 42 26.51	0.10	4	70.800				2200
17841	+0	3940	7.83	A0	25 16.306	0.37	2	72.784	+0 10 03.17	0.30	2	72.784	25191			14865
17842	-38	12818	7.6	K5	25 20.676	0.24	4	70.476	-38 03 40.47	0.24	3	70.189				14866
17843	-37	12589	8.3	G5	18 25 23.279	0.08	5	70.612	-37 01 44.04	0.07	5	70.612				14867
17844	-6	4769	8.1	F5	25 25.820	0.17	2	71.503	-6 11 01.70	0.42	2	71.503				14868
17845	-63	4421	7.8	K0	25 36.342	0.08	4	69.384	-63 11 08.79	0.15	4	69.384				14869
17846	-57	9063	5.79	K0	25 38.433	0.12	6	68.764	-57 33 23.89	0.13	6	68.764	3464	25202	4098	33464
17847	-47	12315	7.48	K0	25 42.355	0.11	4	70.664	-47 07 09.39	0.05	4	70.664	25204			2201
17848	-87	274	5.22	K0	18 25 44.373	0.05	55	71.065	-87 39 12.67	0.07	53	70.992	922	25207	4099	30922
17848	SP				25 44.506	0.03	53	70.818	-87 39 12.61	0.07	51	70.865	922	25207	4099	50922
17849	+3	4288	8.38	G0	25 46.919	0.00	2	70.465	-3 54 22.91	0.03	2	70.465	25208			14870
17850	+3	3719	8.0	A0	25 50.908	0.01	2	72.041	+3 55 58.92	0.61	2	72.041				14871
17851	-31	15574	9.1	K5	25 51.867	0.12	4	70.712	-31 34 37.45	0.07	4	70.712				14872

17807 G0+A3.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17852	-14	5069	9.0	F2	18 25 54.586	0.05	2	72.498	-14 13 20.93	0.61	2	72.498				14873
17853	+3	3720	8.3	F0	25 54.629	0.01	2	71.522	+3 44 48.87	0.17	2	71.522				14874
17854	-10	4705	8.2	G0	26 01.827	0.18	2	72.191	-10 15 33.72	0.28	2	72.191				14875
17855	-13	4995	8.0	K2	26 04.442	0.06	2	71.495	-12 59 36.56	0.19	2	71.495				14876
17856	-59	7277	7.6	K5	26 04.785	0.10	4	69.485	-59 19 34.44	0.09	4	69.485				14877
17857	-32	14200	8.7	G5	18 26 18.394	0.12	4	70.274	-32 39 46.31	0.13	4	70.274				14878
17858	-14	5071	4.73	A3	26 20.805	0.03	35	71.184	-14 35 58.01	0.05	35	71.184	696	25220	4102	30696
17859	-72	2258	8.0	G5	26 24.828	0.10	4	70.011	-72 43 27.36	0.13	4	70.011				20022
17860	-34	12863	8.0	M0	26 25.933	0.09	4	70.755	-34 18 10.08	0.26	4	70.755				14879
17861	-39	12657	8.2	K2	26 30.354	0.04	4	70.565	-39 33 56.05	0.11	4	70.565				14880
17862	-74	1682	5.86	K2	18 26 30.646	0.13	5	70.307	-74 00 03.08	0.12	5	70.307	3466	25223	4103	33466
17862	SP				26 30.647	0.05	45	71.538	-74 00 03.75	0.09	41	71.536	3466	25223	4103	53466
17863	-29	15006	8.8	G5	26 33.185	0.23	4	70.063	-29 51 40.94	0.05	4	70.063				14881
17864	-2	4638	8.3	F8	26 38.353	0.10	2	72.968	-2 48 23.20	0.28	2	72.968				14882
17865	-33	13268	8.11	G5	26 42.409	0.10	4	70.495	-33 34 55.42	0.16	4	70.495		25228		14883
17866	-50	11970	9.3	G5	18 26 44.541	0.12	4	69.975	-50 28 48.33	0.08	4	69.975				2202
17867	-9	4749	8.3	A0	26 50.376	0.06	2	73.379	-9 19 21.86	0.03	2	73.379				14884
17868	-2	4641	5.44	K0	27 04.820	0.03	93	71.328	-2 01 09.92	0.04	90	71.267	1480	25234	4105	81480
17869	-53	9171	7.5	K0	27 05.325	0.04	4	70.008	-53 33 45.92	0.21	4	70.008				14885
17870	-1	3500	8.4	K5	27 16.179	0.12	2	72.469	-1 51 04.55	0.47	2	72.469				14886
17871	-24	14402	8.36	A0	18 27 20.659	0.05	4	71.081	-24 05 53.77	0.13	4	71.081		25242		14887
17872	-23	14431	6.99	K0	27 26.894	0.08	4	71.106	-23 17 08.54	0.16	4	71.106		25247	4106	14888
17873	-2	4642	8.5	A3	27 31.472	0.31	2	72.529	-2 37 32.47	-	1	71.638				14889
17874	-35	12673	7.7	G5	27 33.811	0.18	4	69.941	-35 21 26.67	0.20	4	69.941				14890
17875	-48	12554	9.3	K0	27 33.822	0.03	5	70.551	-48 23 06.43	0.12	5	70.551				2203
17876	-5	4675	6.33	G5	18 27 33.861	0.05	5	70.837	-5 45 32.50	0.10	5	70.837	3468	25253		33468
17877	-58	7411	8.3	K5	27 36.010	0.18	4	70.051	-58 10 00.33	0.11	4	70.051				14891
17878	+3	3727	6.50	B5	27 36.021	0.10	6	71.084	+4 01 49.59	0.14	6	71.084	3469	25256	4107	33469
17879	-54	8914	9.1	K0	27 36.208	0.08	4	69.924	-54 12 52.53	0.11	5	70.216				14892
17880	-61	6175	8.8	K5	27 40.393	0.28	4	70.029	-61 14 37.39	0.21	4	70.029				14893
17881	-28	14656	7.8	K5	18 27 44.646	0.17	4	69.754	-27 59 14.14	0.09	4	69.754				14894
17882	-24	14415	8.1	B9	27 57.635	0.06	4	70.996	-24 55 39.81	0.12	4	70.996				14895
17883	-37	12636	7.6	G5	27 59.356	0.07	4	70.713	-37 37 44.16	0.11	4	70.713				14896
17884	-45	12550	5.05	B8	28 03.207	0.12	7	71.331	-45 57 03.24	0.08	6	71.331		25269		21154
17885	-4	4481	8.8	F5	28 10.133	0.05	2	70.465	-4 39 16.40	0.00	2	70.465				14897
17886*	-75	1423	9.4	A5	18 28 15.584	1.19	4	70.033	-75 41 31.89	0.25	4	70.033				20024
17886	SP				28 15.835	0.35	4	70.699	-75 41 31.43	0.27	4	70.699				20024
17887	-67	3562	8.9	K5	28 16.001	0.06	4	69.855	-67 50 29.47	0.13	4	69.855				20023
17888	-45	12556	5.33	B5	28 20.075	0.06	6	70.794	-45 47 37.73	0.13	6	70.794		25273		21155
17889	+12	3557	7.2v	A0	28 20.269	0.09	4	69.039	+12 34 31.59	0.09	4	69.039		25274		27439
17890	-44	12672	8.02	K2	18 28 22.686	0.16	4	70.752	-44 37 50.00	0.09	4	70.752		25275		2204
17891	-11	4655	8.6	F0	28 23.331	0.22	2	70.001	-11 55 34.68	0.31	2	70.001				14898
17892	-79	960	8.0	G5	28 26.836	0.13	4	70.849	-79 40 08.11	0.07	4	70.849				20025
17892	SP				28 26.821	0.13	4	70.478	-79 40 07.22	0.28	4	70.478				20025
17893	-30	15791	9.1	K0	28 28.796	0.27	4	70.388	-30 56 42.29	0.12	4	70.388				14899
17894	-21	5032	8.5	K5	18 28 29.415	0.05	4	69.882	-21 17 08.63	0.05	4	69.882				14900
17895	-25	13207	8.6	F8	28 34.523	0.10	4	70.785	-25 43 36.69	0.22	4	70.785				14901
17896	-56	8833	8.3	K2	28 47.259	0.09	4	69.408	-56 41 00.33	0.08	4	69.408				14902
17897	-0	3501	7.01	B8	28 47.641	0.23	2	70.439	-0 31 05.92	0.25	2	70.439		25283	4110	14903
17898	+16	3529	5.67	A0	28 50.861	0.05	21	71.607	+16 53 32.72	0.08	21	71.607	1481	25284	4111	31481
17899	-40	12578	8.7	F2	18 28 51.271	0.19	4	70.590	-40 03 11.67	0.16	4	70.590				2205
17900	-15	5001	7.8	F0	28 58.620	0.09	2	70.464	-15 13 10.16	0.17	2	70.464		25289		14904
17901	-29	15058	6.90	G0	29 03.188	0.05	4	69.490	-29 13 38.51	0.09	4	69.490		25291		14905
17902	-45	12563	8.9	K0	29 11.139	0.08	4	71.039	-45 12 30.65	0.18	4	71.039				2206
17903	-35	12700	7.02	K0	29 12.479	0.07	4	71.062	-35 23 12.97	0.18	4	71.062		25297		14906
17904	-19	5053	7.33	K2	18 29 16.321	0.28	2	72.439	-19 09 40.22	0.39	2	72.439		25300		14907
17905	-51	11636	9.1	F2	29 17.038	0.14	4	69.050	-51 36 38.42	0.17	4	69.050				2207
17906	-6	4783	8.1	K5	29 17.249	0.11	2	71.522	-6 09 05.48	0.34	2	71.522				14908
17907	-42	13362	8.5	K2	29 19.034	0.14	4	70.726	-41 58 43.47	0.08	4	70.726				2208
17908p	-9	4762	7.9	A0	29 27.077	0.01	2	70.080	-9 24 27.33	0.58	2	70.080				14909
17909	-27	12943	8.8	A3	18 29 30.514	0.15	4	70.688	-27 13 37.39	0.26	4	70.688				14910
17910	-39	12704	6.27	F0	29 31.504	0.12	6	68.865	-39 55 45.15	0.04	6	68.865	3470	25304		33470
17911	-16	4919	8.8	B9	29 34.602	0.22	2	71.997	-15 58 10.13	0.18	2	71.997				14911
17912	-50	12002	8.0	K0	29 39.987	0.19	4	70.203	-50 14 59.09	0.16	4	70.203				2209
17913	-82	737	7.8	K5	29 40.803	0.05	4	69.918	-82 56 26.49	0.23	4	69.918				20026
17913	SP				18 29 40.876	0.24	4	69.228	-82 56 26.21	0.47	4	69.228				20026
17914	-86	357	8.14	F5	29 55.077	0.21	4	70.817	-86 14 33.89	0.12	4	70.817		25312		20027
17914	SP				29 55.188	0.23	4	69.669	-86 14 33.31	0.33	4	69.669		25312		20027
17915	+2	3611	8.9	K0	29 56.000	0.16	2	72.144	+2 53 08.86	0.23	2	72.144				14912
17916	-42	13378	4.69	G5	29 56.022	0.03	54	71.359	-42 21 02.82	0.04	52	71.295	697	25313	4115	30697
17917	-8	4627	8.8	F0	18 29 56.257	0.24	2	71.503	-8 02 02.38	0.18	2	71.503				14913
17918	+0	3960	8.5	F5	30 07.954	-	1	71.663	+0 32 22.04	-	1	71.663				14914
17919	-35	12715	9.2	K0	30 12.528	0.08	4	70.700	-35 48 52.31	0.08	4	70.700				14915
17920	-10	4717	8.7	G5	30 17.524	0.13	2	72.004	-10 44 30.43	0.02	2	72.004				14916
17921	-22	4772	8.4	F0	30 20.596	0.08	4	70.628	-22 39 32.45	0.05	4	70.628				14917

17886 9.6m-11.0m, 1°9, 154°.
17889 7.2m to 7.9m.

17908 A 11429, 11.1m, 7°8, 167°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17922	-	0 3505	8.9	K2	18 30 21.247	0.05	2	69.965	- 0 22' 07.00	0.18	2	69.965				14918
17923	-	5 4686	7.10	G5	30 27.338	0.25	2	71.488	- 5 12' 03.83	0.12	2	71.488		25323		14919
17924	-	62 5891	8.9	K0	30 27.973	0.04	4	69.534	-62 13' 24.15	0.15	4	69.534				14920
17925	-	20 5179	8.8	B9	30 30.552	0.12	4	69.950	-20 24' 24.97	0.17	4	69.950				14921
17926	-	36 12791	8.2	G5	30 33.497	0.11	5	70.629	-36 25' 08.72	0.10	5	70.629				14922
17927	-	37 12676	8.4	G5	18 30 36.609	0.15	4	70.800	-37 44' 49.34	0.09	4	70.800				14923
17928	-	8 4631	7.9	A5	30 36.965	0.38	2	72.030	- 8 36' 19.83	0.10	2	72.030				14924
17929	-	33 13338	5.38	B3	30 40.937	0.15	6	69.966	-33 03' 19.88	0.11	6	69.966	3471	25327	4117	33471
17930	+23	3363	5.99	K5	30 41.239	0.15	6	69.973	+23 34' 42.09	0.14	6	69.973	3472	25328		33472
17931	+ 1	3711	8.2	K0	30 43.180	0.26	2	71.504	+ 1 48' 29.03	0.15	2	71.504				14925
17932	-42	13392	7.70	G5	18 30 43.457	0.10	4	70.727	-42 37' 48.15	0.16	4	70.727		25330		2210
17933	-76	1241	9.0	K0	30 50.829	0.12	5	70.664	-76 49' 28.87	0.11	5	70.664				20028
17933	SP				30 50.810	0.13	4	69.489	-76 49' 28.45	0.35	4	69.489				20028
17934	-52	11161	6.86	K0	30 53.819	0.15	6	69.347	-52 25' 36.51	0.07	6	69.347	3473	25338		33473
17935	-55	8734	7.49	K5	30 58.967	0.08	4	69.852	-55 37' 21.44	0.12	4	69.852		25341		14926
17936	-49	12216	7.8	K0	18 31 00.114	0.08	5	71.081	-49 23' 30.32	0.02	4	71.017				2211
17937	-39	12720	8.7	K2	31 03.289	0.18	4	69.933	-39 06' 03.61	0.15	4	69.933				14927
17938	-17	5236	8.3	F0	31 07.347	0.16	2	71.970	-17 34' 44.00	0.21	2	71.970		25350		14928
17939	-48	12599	8.2	K0	31 08.765	0.12	4	70.707	-48 11' 28.17	0.03	4	70.707				2212
17940	-46	12480	8.8	G5	31 11.344	0.14	5	71.348	-46 43' 52.31	0.10	5	71.348				2213
17941	+ 4	3791	8.2	K0	18 31 12.139	0.12	2	71.503	+ 4 33' 11.50	0.19	2	71.503				14929
17942	-65	3740	8.3	K5	31 12.856	0.10	4	69.871	-65 34' 23.53	0.09	4	69.871				20029
17943	-31	15696	7.8	K0	31 18.884	0.10	4	68.957	-31 18' 07.19	0.12	4	68.957				14930
17944	- 2	4653	8.0	F5	31 19.243	0.19	2	70.507	- 2 51' 36.70	0.03	2	70.507				14931
17945	-44	12714	8.0	K0	31 23.693	0.10	4	70.813	-44 32' 37.54	0.24	4	70.813				2214
17946	-13	5032	8.6	K5	18 31 26.602	0.02	2	70.487	-13 06' 16.37	0.00	2	70.487				14932
17947	-66	3383	7.7	K2	31 26.929	0.17	4	69.928	-66 55' 46.42	0.11	4	69.928				20030
17948	-24	14479	6.39	F0	31 29.203	0.08	4	69.077	-24 15' 44.49	0.13	4	69.077		25358		14933
17949	- 7	4623	7.5	A0	31 29.660	0.00	2	70.991	- 7 45' 07.65	0.08	2	70.991				14934
17950	- 2	4655	9.0	K5	31 33.303	0.03	2	72.143	- 2 05' 03.29	0.26	2	72.143				14935
17951	- 4	4497	8.2	B8	18 31 36.509	0.01	2	71.984	- 4 51' 12.74	0.15	2	71.984				14936
17952	-14	5113	8.4	K2	31 42.283	0.04	2	72.000	-14 36' 31.21	0.18	2	72.000				14937
17953	- 4	4498	8.9	K2	31 50.180	0.17	2	72.164	- 4 44' 57.31	0.53	2	72.164				14938
17954	-72	2277	8.3	M1	31 55.621	0.03	5	71.468	-72 01' 00.83	0.13	5	71.468				20031
17955	+ 3	3747	7.50	A2	32 05.130	0.10	2	72.121	+ 3 05' 43.37	0.20	2	72.121			4122	14939
17956	- 2	4658	8.5	F0	18 32 08.551	0.04	2	72.822	- 1 57' 05.54	0.03	2	72.822				14940
17957	+20	3847	6.44	A2	32 10.412	0.11	6	71.712	+20 25' 34.39	0.08	6	71.712	3476	25371	4123	33476
17958	-11	4681	5.25	G5	32 15.662	0.09	6	69.524	-11 01' 04.29	0.10	6	69.524	3477	25374	4125	33477
17959	-56	8863	8.9	K2	32 16.434	0.08	4	69.574	-56 02' 46.24	0.11	4	69.574				14941
17960	-84	578	8.8	K5	32 19.208	0.11	4	70.481	-84 46' 27.94	0.11	4	70.481				20032
17960	SP				18 32 18.923	0.17	4	69.598	-84 46' 27.58	0.13	4	69.598				20032
17961	-52	11169	9.1	K0	32 19.809	0.13	4	69.553	-52 55' 29.47	0.12	4	69.553				14942
17962	-34	12944	9.0	G5	32 24.191	0.18	4	70.513	-34 56' 51.84	0.16	4	70.513				14943
17963	- 8	4638	4.06	K0	32 29.081	0.02	96	71.316	- 8 16' 57.15	0.04	94	71.282	1482	25385	4129	81482
17964	-58	7437	7.49	K0	32 33.158	0.05	4	70.043	-58 37' 41.78	0.17	4	70.043		25389	4130	14944
17965	-33	13377	8.3	K2	18 32 36.130	0.05	5	70.523	-33 12' 59.21	0.04	5	70.523				14945
17966	- 9	4770	8.6	K0	32 37.612	0.06	2	72.149	- 9 05' 33.64	0.10	2	72.149				14946
17967	-30	15891	9.0	K0	32 40.016	0.22	5	71.539	-30 04' 49.65	0.08	5	71.539				14947
17968	-47	12395	9.0	G0	32 40.573	0.03	4	70.772	-47 01' 39.90	0.24	4	70.772				2215
17969	-18	5008	8.2	B3	32 40.765	0.06	2	71.995	-18 35' 31.08	0.06	2	71.995				14948
17970	-38	12928	8.9	K0	18 32 41.198	0.03	4	70.466	-38 30' 11.19	0.08	4	70.466				14949
17971	-29	15123	6.48	K0	32 48.123	0.07	6	69.676	-29 44' 26.23	0.06	6	69.676	3478	25395		33478
17972	-26	13312	8.6	G5	33 02.445	0.10	4	70.378	-26 36' 41.09	0.11	4	70.378				14950
17973	-70	2568	7.22	K5	33 04.603	0.15	4	69.483	-70 16' 44.00	0.07	4	69.483		25400		20033
17974	-32	14296	8.5	M2	33 05.241	0.04	4	70.072	-32 22' 09.19	0.16	4	70.072				14951
17975	-60	7103	8.8	G7	18 33 07.419	0.14	4	70.236	-60 31' 35.09	0.08	4	70.236				14952
17976	-27	13008	8.3	K5	33 21.703	0.08	4	70.734	-27 04' 12.93	0.10	4	70.734				14953
17977	-44	12748	8.57	K0	33 38.982	0.17	5	70.989	-44 03' 40.99	0.16	5	70.989		25410		2216
17978*	-20	5196	7.37	B5	33 41.157	0.11	4	71.254	-20 21' 23.58	0.20	3	70.533				14954
17979	-24	14521	8.7	K0	33 43.929	0.14	4	70.446	-24 51' 36.15	0.12	4	70.446				14955
17980	-40	12648	6.75	K0	18 33 44.857	0.06	4	70.016	-40 50' 46.82	0.11	4	70.016		25414		2217
17981	-17	5259	8.0	F0	33 47.605	0.04	2	71.999	-17 14' 58.15	0.02	2	71.999		25415		14956
17982	-27	13015	8.6	G0	33 49.900	0.08	4	70.311	-27 46' 24.00	0.16	4	70.311				14957
17983	-43	12669	8.9	G5	33 53.968	0.09	4	70.321	-43 31' 37.70	0.10	4	70.321				2218
17984	-16	4952	7.38	K5	33 54.860	0.13	3	71.428	-15 59' 17.61	0.18	3	71.428		25418		14958
17985	- 3	4316	8.5	B9	18 33 55.755	-	1	71.682	- 3 07' 13.16	-	1	71.682				14959
17986	-29	15145	8.30	G5	33 59.378	0.08	4	70.347	-29 16' 49.46	0.09	4	70.347		25419		14960
17987	+ 9	3783	5.40	F2	34 04.634	0.03	37	71.524	+ 9 04' 51.12	0.06	35	71.471	1484	25422	4133	31484
17988	-25	13291	7.44	G0	34 06.931	0.06	4	70.974	-25 42' 43.72	0.05	4	70.974		25424	4134	14961
17989	+ 3	3755	6.63	K0	34 24.647	0.13	2	71.623	+ 3 44' 48.06	0.15	2	71.623		25432		14962
17990	-46	12513	9.2	K0	18 34 27.522	0.18	4	69.921	-46 36' 28.89	0.25	4	69.921				2219
17991	-21	5070	8.8	A3	34 27.902	0.10	4	70.813	-21 32' 22.26	0.15	4	70.813				14963
17992	+ 0	3975	7.02	F8	34 36.696	0.10	3	71.431	+ 0 54' 26.94	0.08	2	71.480		25437	4135	14964
17993	+10	3588	8.8	A2	34 39.331	0.09	4	69.896	+10 13' 32.54	0.19	4	69.896				27455
17994	-23	14564	8.5	G0	34 47.848	0.10	4	70.401	-23 26' 26.95	0.09	4	70.401				14965

17978 A 11487, 7.4m-10.4m, 1st, 162°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
17995	+	2 3627	8.7	K0	18 34 48.582	0.04	2	71.380	+ 2 12 39.54	0.03	2	71.380				14966
17996	-	3 4325	6.68	K0	34 52.554	0.02	2	71.971	- 2 57 50.11	0.10	2	71.971		25447		14967
17997	-21	5076	5.80	A5	34 54.760	0.04	46	71.613	-21 26 28.49	0.04	44	71.554	1485	25450	4136	14968
17998	-19	5105	8.5	K5	34 54.843	0.02	2	72.479	-19 38 45.33	0.27	2	72.479				14969
17999	-57	9125	8.6	K0	34 56.426	0.12	4	68.874	-57 13 06.76	0.24	3	68.733				14970
18000	+	3 3757	8.0	K5	18 34 56.922	0.22	2	71.629	+ 3 10 34.59	0.04	2	71.629				14971
18001	-17	5271	6.80	F2	34 57.289	0.05	6	71.345	-17 16 30.95	0.07	6	71.345	3479	25452	4137	14972
18002	-7	4636	7.9	G0	35 00.103	0.03	2	70.040	- 7 22 48.25	0.14	2	70.040		25455		14973
18003	-0	3521	5.80	A0	35 01.761	0.13	6	70.615	- 0 21 11.88	0.18	6	70.615	3480	25456		14974
18004*	-11	4692	8.9	F8	35 02.254	0.26	2	72.499	-11 23 55.45	0.28	2	72.499				14975
18005	+	1 3729	8.7	K2	18 35 05.291	0.07	2	70.488	+ 1 41 14.35	--	1	69.281				14976
18006	-67	3584	9.4	K0	35 08.884	0.11	4	69.083	-67 34 01.12	0.08	4	69.083				14977
18007	-6	4816	8.2	K0	35 09.431	0.17	2	71.973	- 6 50 27.73	0.40	2	71.973				14978
18008	-50	12062	8.9	K0	35 11.853	0.17	4	70.098	-50 05 56.14	0.10	4	70.098				14979
18009	-9	4779	8.6	B8	35 12.627	0.10	2	72.490	- 8 59 57.46	0.25	2	72.490				14980
18010f	-14	5139	6.45	B9	18 35 14.230	0.02	2	72.476	-14 02 57.08	0.44	2	72.476		25465		14981
18011	-59	7328	7.5	M0	35 23.709	0.15	4	69.072	-59 20 49.73	0.12	4	69.072				14982
18012	-5	4709	8.9	A0	35 23.900	0.08	2	70.468	- 4 58 00.52	0.35	2	70.468				14983
18013	-48	12644	6.04	A5	35 27.354	0.11	6	70.622	-47 57 18.03	0.12	6	70.622	3482	25474	4139	14984
18014	-1	3529	6.49	F2	35 43.974	0.23	2	71.534	- 1 09 27.49	--	1	72.400		25480		14985
18015	-6	4823	8.5	F2	18 35 57.374	0.24	3	72.405	- 6 02 07.40	0.11	3	72.405				14986
18016	-12	5127	8.1	A2	35 57.407	0.12	2	71.536	-12 05 49.52	0.05	2	71.536				14987
18017	-32	14568	8.1	G5	36 10.067	0.11	4	69.906	-32 04 47.93	0.06	4	69.906				14988
18018	-15	5043	7.75	K5	36 11.022	0.29	2	71.463	-15 05 04.89	0.53	2	71.463		25494		14989
18019	-42	13482	8.9	A5	36 15.643	0.22	4	70.041	-42 18 21.95	0.14	4	70.041				14990
18020	+14	3603	6.86	A0	18 36 18.342	0.10	6	71.309	+15 02 18.03	0.14	6	71.309	3483	25497		14991
18021	-69	2931	8.6	K0	36 27.391	0.09	3	70.588	-69 04 50.12	0.01	3	70.588				14992
18022	-22	4817	8.2	A0	36 29.850	0.11	4	70.155	-22 00 41.33	0.08	4	70.155				14993
18023	-2	4686	7.18	K0	36 37.386	0.03	2	69.947	- 1 59 51.35	0.04	2	69.947		25504		14994
18024	-41	13001	9.1	K2	36 40.541	0.22	4	69.982	-41 01 07.14	0.06	4	69.982				14995
18025	-72	2294	8.8	K0	18 36 41.717	0.13	4	71.252	-72 31 55.77	0.22	4	71.252				14996
18026	-25	13318	9.18	A2	36 43.230	0.10	4	69.462	-25 32 49.16	0.06	4	69.462		25509		14997
18027	-60	7129	9.0	G6	36 46.333	0.10	4	70.271	-60 21 19.07	0.29	4	70.271				14998
18028	-52	11203	8.6	K0	36 47.353	0.08	4	70.208	-52 36 21.84	0.09	4	70.208				14999
18029	-70	2576	7.36	A0	36 52.033	0.05	4	70.533	-70 21 04.04	0.17	4	70.533		25514		15000
18030	-33	13450	9.0	G0	18 37 00.055	0.11	4	70.039	-33 42 04.76	0.15	4	70.039				15001
18031	-77	1308	8.4	K0	37 02.198	0.13	4	69.910	-77 19 27.15	0.14	4	69.910				15002
18031 SP					37 02.299	0.23	4	69.735	-77 19 26.88	0.24	4	69.735				15003
18032	-62	5924	9.0	G5	37 06.584	0.12	4	70.328	-62 49 19.38	0.17	4	70.328				15004
18033	-62	5926	8.7	K5	37 06.681	0.07	4	70.520	-61 59 02.69	0.03	4	70.520				15005
18034	+	0 3989	8.0	K0	18 37 06.758	0.11	2	71.504	+ 0 06 05.09	0.10	2	71.504				15006
18035	+	5 3891	6.30	G0p	37 09.123	0.11	6	69.547	+ 5 13 04.31	0.09	6	69.547	3485	25520		15007
18036	-71	2353	4.10	K0	37 12.202	0.03	89	71.203	-71 28 31.21	0.04	87	71.130	698	25522	4143	15008
18036 SP					37 12.171	0.05	75	71.312	-71 28 31.59	0.09	72	71.324	698	25522	4143	15009
18037	-1	3534	8.6	A2	37 14.768	0.01	2	71.447	- 1 20 08.69	0.12	2	71.447			4144	15010
18038	-64	3941	8.40	K2	18 37 17.763	0.12	4	71.146	-64 32 48.06	0.15	4	71.146		25526		15011
18039	-71	2354	7.7	M1	37 22.416	0.18	4	70.636	-71 20 13.31	0.15	4	70.636				15012
18040	-47	12452	9.0	K0	37 32.951	0.10	4	70.532	-47 18 41.09	0.16	4	70.532				15013
18041	+	3 3769	8.8	A2	37 35.080	0.05	2	71.463	+ 3 18 35.09	0.01	2	71.463				15014
18042	-45	12671	8.3	K2	37 38.534	0.08	4	70.505	-45 17 41.07	0.05	4	70.505				15015
18043	-74	1696	8.8	G5	18 37 38.627	0.07	5	71.982	-74 47 27.92	0.20	5	71.982				15016
18044	-37	12780	8.8	K5	37 39.278	0.08	4	70.438	-37 42 04.60	0.16	4	70.438				15017
18045	-55	8789	8.4	M0	37 43.481	0.13	4	71.276	-55 20 58.56	0.21	4	71.276				15018
18046	-30	16026	7.55	K2	37 47.799	0.14	4	70.680	-30 34 35.20	0.18	4	70.680		25539		15019
18047	-36	12907	7.7	K2	37 54.789	0.10	5	70.943	-36 21 22.55	0.16	4	70.831				15020
18048	-13	5067	8.6	K2	18 37 57.915	0.07	2	71.523	-13 22 53.03	0.01	2	71.523				15021
18049	-4	4547	7.5	K0	38 08.473	0.36	3	72.397	- 4 32 38.49	0.14	3	72.397				15022
18050	-28	14871	7.8	K2	38 15.437	0.04	4	69.470	-28 00 21.23	0.07	4	69.470				15023
18051	-39	12823	8.2	G5	38 23.413	0.14	4	70.452	-39 43 25.60	0.13	4	70.452				15024
18052	-25	13351	8.4	K0	38 32.334	0.17	4	70.000	-25 02 11.50	0.06	4	70.000				15025
18053	-31	15848	8.26	G5	18 38 33.133	0.20	3	71.339	-31 13 05.42	0.30	3	71.339		25554		15026
18054	-3	4351	8.3	K2	38 35.647	0.18	2	71.986	- 3 51 54.46	0.03	2	71.986				15027
18055	-69	2936	8.2	K5	38 35.764	0.04	4	70.479	-69 13 38.76	0.13	4	70.479				15028
18056	-54	9019	8.4	K0	38 39.158	0.08	4	70.748	-54 01 56.16	0.17	4	70.748				15029
18057	-18	5037	8.8	G	38 41.135	0.04	2	72.015	-18 02 10.76	0.04	2	72.015				15030
18058	-10	4756	8.3	K2	18 38 41.215	0.27	2	71.988	-10 26 41.41	0.15	2	71.988				15031
18059	-54	9018	8.4	G5	38 42.539	0.08	4	70.297	-54 31 48.63	0.08	4	70.297				15032
18060	-43	12742	9.07	K0	38 44.468	0.06	4	70.826	-43 39 20.15	0.21	4	70.826		25560		15033
18061	-8	4679	8.3	F0	38 46.834	0.16	2	72.042	- 8 34 23.31	0.04	2	72.042				15034
18062	-23	14625	6.14	A2	38 48.673	0.08	6	69.297	-23 52 54.74	0.09	6	69.297	3486	25563	4145	15035
18063	-14	5156	6.50	F5	18 38 51.541	0.36	2	71.993	-14 36 46.50	0.15	2	71.993		25564		15036
18064	+	4 3838	7.3	F8	38 51.675	0.09	2	71.999	+ 4 30 36.05	0.01	2	71.999				15037
18065	-83	662	7.71	K2	38 52.456	0.13	4	70.525	-83 37 02.46	0.09	4	70.525		25566		15038
18065 SP					38 52.281	0.29	4	69.962	-83 37 02.68	0.20	4	69.962		25566		15039
18066	-34	13045	8.5	F8	38 53.228	0.10	4	70.001	-34 05 20.70	0.06	4	70.001				15040

18004 A 11508, 9.2m, m, 0°4, 203°.

18010 A 11512, 11.2m, 2°4, 186°.

CATALOG OF 23,001 STARS FOR 1950.0

485

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18067	+	0 3993	7.6	K2	18 38 53.536	0.15	2	72.130	+ 0 30' 58.19	0.04	2	72.130				15014
18068	-	76 1258	9.1	A3	38 57.532	0.07	4	70.356	-75 56 18.87	0.10	4	70.356				20044
18068	SP				38 57.434	0.07	4	70.000	-75 56 18.57	0.62	4	70.000				20044
18069	-	35 12847	7.8	K2	39 10.604	0.05	4	70.772	-35 12 15.77	0.12	4	70.772				15015
18070	-	23 14634	7.5	K2	39 12.130	0.19	4	69.962	-23 20 31.95	0.05	4	69.962				15016
18071	-	17 5291	7.38	K0	18 39 16.264	0.12	2	72.019	-17 03 36.85	0.05	2	72.019		25574		15017
18072	-	48 12681	8.5	G5	39 25.494	0.06	4	70.302	-48 26 17.75	0.09	4	70.302				2226
18073	-	20 5240	7.9	B9	39 27.308	0.10	4	70.719	-20 21 40.80	0.08	4	70.719				15018
18074	-	26 13399	8.5	K0	39 28.007	0.18	4	70.775	-26 39 13.42	0.26	4	70.775				15019
18075	-	29 15253	8.4	K0	39 29.958	0.17	4	70.021	-29 31 41.11	0.26	4	70.021				15020
18076	-	9 4796	4.7v	F0	18 39 32.117	0.06	18	71.285	- 9 06 07.16	0.07	17	71.160	1486	25580	4146	31486
18077	-	51 11727	8.8	K0	39 32.822	0.17	4	70.466	-51 05 42.54	0.13	4	70.466				2227
18078	-	9 4798	8.7	K5	39 38.221	0.27	2	72.098	- 9 32 23.42	0.21	2	72.098				15021
18079	-	81 815	8.3	F8	39 41.234	0.21	4	70.472	-81 19 28.97	0.09	4	70.472				20045
18079	SP				39 41.152	0.04	6	71.068	-81 19 28.98	0.09	4	71.054				20045
18080	-	49 12298	8.9	K2	18 39 44.910	0.18	4	70.783	-49 03 05.02	0.19	4	70.783				2228
18081	-	12 5150	9.0	A2	39 46.179	--	1	72.460	-11 57 03.81	--	1	72.460				15022
18082	-	59 7348	7.86	K0	39 47.138	0.19	4	69.478	-59 01 51.73	0.18	4	69.478		25582		15023
18083	-	15 5067	8.2	G5	39 47.721	0.22	2	72.572	-15 34 17.23	0.20	2	72.572				15024
18084	-	38 13027	8.7	K2	39 52.242	0.16	4	70.374	-38 29 55.24	0.17	4	70.374				15025
18085	-	19 5134	6.49	M3	18 39 58.285	0.32	2	72.099	-19 20 02.51	0.29	2	72.099		25588		15026
18086	-	7 4672	9.1v	A0	40 01.225	0.11	3	69.469	- 7 44 33.30	0.18	3	69.469				27472
18087	-	83 663	6.77	K2	40 02.960	0.11	6	69.933	-83 22 18.38	0.10	6	69.933	3992	25590		33992
18087	SP				40 02.929	0.15	5	70.081	-83 22 18.69	0.28	5	70.081	3992	25590		53992
18088	-	72 2300	6.79	F2	40 09.686	0.09	6	70.678	-72 51 54.39	0.13	6	70.678	3488	25594		33488
18088	SP				18 40 09.612	0.21	10	71.720	-72 51 54.96	0.24	10	71.720	3488	25594		53488
18089	-	9 4802	8.1	K0	40 19.140	0.17	2	72.209	- 9 13 12.75	0.25	2	72.209				15027
18090	-	32 14435	9.0	K0	40 27.675	0.20	3	70.810	-32 32 23.24	0.13	4	70.761				15028
18091	-	67 3592	8.6	K0	40 32.722	0.10	4	70.229	-67 54 09.79	0.19	4	70.229				20046
18092	-	64 3948	4.90	A2	40 32.839	0.15	6	71.345	-64 55 19.16	0.10	6	71.345	3489	25604	4150	33489
18093	-	21 5118	8.1	K0	18 40 33.801	0.20	4	71.862	-20 58 10.81	0.12	4	71.862				15029
18094	-	66 3390	9.2	K0	40 38.141	0.16	4	71.857	-66 03 34.60	0.14	4	71.857				20047
18095	-	8 4686	5.09	G5	40 47.851	0.04	13	71.819	- 8 19 34.24	0.10	12	71.754	702	25610	4152	30702
18096	-	5 4738	8.3	A2	40 50.148	0.01	2	70.481	- 5 31 00.01	0.40	2	70.481				15030
18097	-	51 11736	8.5	K0	40 51.613	0.19	4	70.274	-51 31 39.33	0.18	4	70.274				2229
18098	-	15 5076	9.0	M2	18 40 53.798	0.01	2	73.382	-15 19 29.56	--	1	73.343				15031
18099	-	35 12876	4.82	B3	40 58.432	0.10	6	71.149	-35 41 35.75	0.15	6	71.149	3490	25613	4154	33490
18100	-	85 484	8.30	M3	41 00.141	0.05	4	70.419	-85 37 28.68	0.17	4	70.419		25615		20048
18100	SP				41 00.084	0.13	4	69.925	-85 37 28.95	0.27	4	69.925		25615		20048
18101	-	37 12817	8.09	M0	41 17.437	0.17	5	71.254	-36 56 21.87	0.21	5	71.254		25620		15035
18102	-	52 11227	8.9	K0	18 41 20.505	0.13	4	70.297	-52 44 42.48	0.13	4	70.297				15036
18103	-	31 15913	8.1	K0	41 23.966	0.13	4	70.256	-31 27 08.68	0.13	4	70.256				15037
18104*	+	2 3668	7.7	G0	41 25.048	0.04	4	69.977	+ 2 34 13.00	0.15	4	69.977		25622		27478
18105	-	30 16133	7.5	K2	41 30.509	0.33	4	70.954	-30 01 56.21	0.09	4	70.954				15038
18106*	-	33 13522	7.6	G0	41 33.662	0.15	4	70.767	-33 26 08.45	0.01	4	70.767				15039
18107	-	25 13390	8.5	F0	18 41 36.411	0.12	4	70.971	-25 25 18.37	0.14	4	70.971				15040
18108	-	21 5127	8.0	K2	41 39.212	0.16	4	70.325	-21 01 24.02	0.10	4	70.325				15041
18109	-	64 3953	7.9	K0	41 42.659	0.14	4	70.241	-64 05 39.80	0.18	4	70.241				15042
18110	+	4 3860	8.2	F5	41 43.104	0.12	2	72.142	+ 4 52 27.81	0.00	2	72.142				15043
18111	+	4 3861	8.7	A0	41 43.410	--	1	70.669	+ 4 47 12.29	--	1	70.669				15044
18112	-	25 13394	5.76	B8	18 41 45.167	0.05	4	70.751	-25 03 46.85	0.04	4	70.751		25636	4156	21156
18113	-	2 4726	8.5	K0	41 45.660	0.09	2	72.147	- 2 32 28.60	0.02	2	72.147				15045
18114	-	48 12701	7.12	K0	41 46.013	0.18	4	70.758	-48 30 43.23	0.14	4	70.758		25637		2230
18115	-	37 12826	8.9	G5	41 55.474	0.19	4	70.922	-37 55 28.75	0.19	4	70.922				15047
18116	-	57 9186	8.9	K2	41 57.814	0.15	4	71.164	-57 08 04.02	0.19	4	71.164				15048
18117	-	46 12592	8.5	K2	18 42 00.074	0.23	3	70.474	-46 39 15.43	0.02	3	70.474				2231
18118	+	1 3764	8.6	K2	42 06.339	--	1	72.291	+ 2 04 07.02	--	1	72.291				15050
18119	-	42 13585	8.5	G5	42 07.548	0.07	4	71.466	-42 28 42.96	0.22	4	71.466				2232
18120	-	40 12780	9.0	F8	42 21.298	0.09	4	71.280	-40 49 34.35	0.03	4	71.280				2233
18121	-	27 13170	3.30	B8	42 32.039	0.04	36	71.115	-27 02 38.55	0.06	36	71.115	1487	25661	4158	81487
18122	-	34 13087	8.1	K0	18 42 36.694	0.16	4	70.561	-34 37 41.01	0.20	4	70.561				15051
18123	-	38 13064	8.8	K0	42 41.378	0.06	5	70.937	-38 46 09.53	0.09	5	70.937				15052
18124	-	17 5310	7.06	B3	42 42.495	0.03	2	72.224	-17 35 53.31	0.37	2	72.224			4159	15053
18125	-	12 5159	7.72	K0	42 45.445	--	1	71.598	-12 38 27.04	--	1	71.598		25670		15054
18126	-	3 4373	8.1	B9	42 49.260	--	1	72.342	- 3 17 04.69	--	1	72.342		25671		15055
18127	-	39 12885	8.6	M1	18 42 52.709	0.14	4	71.079	-39 54 47.56	0.07	4	71.079				15056
18128	-	27 13176	6.70	G5	42 55.853	0.07	4	71.302	-27 33 10.71	0.22	4	71.302		25673		15057
18129	-	35 12908	9.0	F5	42 58.027	0.07	4	70.821	-35 54 52.25	0.14	4	70.821				15058
18130	-	19 5153	8.2	K0	42 59.517	--	1	73.343	-19 08 08.85	--	1	73.343				15059
18131	-	63 4449	8.7	K0	43 04.464	0.14	5	70.903	-63 01 31.26	0.17	5	70.903				15060
18132	-	73 1527	8.6	K2	18 43 06.745	0.05	4	70.822	-73 00 38.40	0.09	4	70.822				20049
18133	-	58 7489	9.1	K0	43 09.988	0.15	4	70.272	-58 00 39.57	0.11	4	70.272				15061
18134	-	15 5086	8.8	A0	43 13.694	--	1	71.701	-15 31 47.47	--	1	71.701				15062
18135	-	6 4885	8.15	K0	43 21.085	0.00	2	70.455	- 6 18 21.66	0.02	2	70.455		25688		15063
18136	-	50 12140	9.0	G0	43 27.737	0.23	4	71.970	-50 53 37.14	0.16	3	71.486				2234

18076 4.7m to 4.9m.

18086 9.1m to 9.4m.

18104 A 11617, 8.2m-8.7m, 0°6, 86°.

18106 SDS, 8.2m-8.7m, 0°4, 334°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
18137	-41	13097	7.9	G5	18 43 28.759	0.04	4	70.727	-41 13 01.13	0.15	5	70.860	703	25698	4163	2235
18138	+20	3926	4.26	F5	43 30.476	0.18	4	70.355	+20 29 42.84	0.09	4	70.355				30703
18139	-29	15345	6.82	M3	43 36.214	0.15	4	69.983	-29 41 09.36	0.29	4	69.983		25702		15064
18140	-45	12754	9.0	K0	43 55.168	0.13	4	71.073	-45 07 17.35	0.16	4	71.073				2236
18141	-14	5187	7.06	F8	43 55.699	--	1	71.720	-14 31 05.02	--	1	71.720		25716		15065
18142	+0	4018	8.8	K5	18 43 56.969	--	1	71.726	+0 48 55.71	--	1	71.726				15066
18143	-22	4859	8.5	B9	43 57.142	0.07	4	69.936	-22 20 53.02	0.15	4	69.936				15067
18144	-43	12818	7.60	K5	43 57.604	0.16	5	71.156	-43 36 05.45	0.12	5	71.156		25717		2237
18145	-47	12528	7.65	K2	44 00.371	0.09	4	71.001	-47 50 30.91	0.05	4	71.001		25719		2238
18146	+26	3349	4.92	K0	44 03.523	0.04	43	71.422	+26 36 27.10	0.06	41	71.448	1488	25721	4165	81488
18147	-7	4700	7.0	B9	18 44 12.154	--	1	70.598	-7 38 02.73	--	1	70.598				15069
18148	-40	12807	5.28	G0	44 14.965	0.07	6	70.216	-40 27 41.42	0.13	6	70.216	3492	25722		33492
18149	-44	12873	8.31	K2	44 22.925	0.14	4	70.934	-44 05 48.39	0.09	4	70.934		25726		2239
18150	-60	7171	8.0	K0	44 25.449	0.18	4	69.937	-60 19 13.93	0.11	4	69.937				15071
18151	-24	14706	8.0	K0	44 27.910	0.15	4	70.798	-24 22 31.93	0.27	3	69.925				15072
18152	-4	4582	4.47	G0	18 44 31.242	0.07	23	71.183	-4 48 11.07	0.08	23	71.183	1489	25730	4167	31489
18153	+3	3799	8.7	K5	44 32.447	--	1	72.465	+3 41 44.81	--	1	72.465				15073
18154	-62	5969	9.0	G5	44 33.577	0.28	4	69.521	-62 25 40.57	0.30	4	69.521				15074
18155	-16	5028	8.2	A5	44 38.208	0.04	2	69.983	-16 02 18.65	0.10	2	69.983				15075
18156	-64	3960	7.9	K2	44 39.389	0.10	4	69.946	-64 50 48.97	0.10	4	69.946				20050
18157	-9	4835	8.7	B	18 44 39.646	0.19	2	71.529	-9 21 49.83	0.38	2	71.529				15076
18158	-56	8967	8.6	K0	44 42.792	0.18	4	69.908	-56 31 34.24	0.07	4	69.908				15077
18159	-67	3596	7.6	K2	44 46.195	0.06	4	70.245	-67 20 38.04	0.10	4	70.245				20051
18160	+18	3823	4.37	A3	44 48.803	0.20	3	70.588	+18 07 30.20	0.10	3	70.588	1491	25734	4168	31491
18161	-23	14726	8.5	A2	44 53.489	0.09	4	69.080	-23 18 47.49	0.12	4	69.080				15078
18162	-12	5168	7.3	K5	18 44 56.784	0.41	2	71.970	-12 23 08.36	--	1	71.619				15079
18163	-52	11248	8.6	G5	45 02.311	0.22	4	70.329	-52 53 29.58	0.15	4	70.329				15080
18164	-0	3555	8.4	G0	45 10.411	0.08	2	72.465	-0 17 33.43	0.29	2	72.465				15081
18165	-43	12841	5.59	A2	45 14.092	0.03	84	71.318	-43 44 11.86	0.04	82	71.277	1490	25748	4169	31490
18166	-72	2307	9.1	G5	45 19.823	0.07	4	70.740	-72 14 42.56	0.11	4	70.740				20052
18167	-41	13125	8.0	G5	18 45 19.914	0.11	4	70.341	-41 23 37.64	0.24	4	70.341				2240
18168	-59	7375	8.5	K3	45 23.278	0.15	4	69.986	-59 39 24.60	0.15	4	69.986				15082
18169	+4	3884	6.34	K5	45 33.708	0.07	6	69.969	+4 11 05.62	0.15	6	69.969	3494	25756	4170	33494
18170	-49	12356	8.1	K0	45 35.854	0.08	4	70.333	-49 46 23.13	0.07	4	70.333				2241
18171	-46	12639	9.0	K0	45 42.074	0.16	4	70.549	-46 23 17.46	0.14	4	70.549				2242
18172	-5	4768	8.3	F5	18 45 42.455	0.28	2	71.010	-5 59 29.14	0.22	2	71.010				15083
18173	-45	12779	5.79	K0	45 46.000	0.07	7	70.047	-45 52 04.81	0.12	6	69.977	3495	25758		33495
18174	-54	9089	8.5	K0	45 48.506	0.20	4	70.508	-54 35 32.59	0.07	4	70.508				15084
18175	-28	15033	8.5	K0	46 13.641	0.17	4	69.429	-28 20 37.98	0.20	4	69.429				15085
18176	-8	4714	7.64	B3	46 15.494	0.05	2	69.977	-8 30 58.02	0.09	2	69.977		25775		15086
18177	-87	282	8.5	K5	18 46 22.414	0.22	3	70.473	-87 15 27.22	0.32	3	70.473				20053
18177	SP				46 22.540	0.07	4	69.515	-87 15 26.64	0.11	4	69.515				20053
18178	-18	5086	8.7	A0	46 28.849	0.10	2	70.451	-18 20 24.76	0.21	2	70.451				15087
18179	-31	16026	8.9	--	46 30.450	0.07	4	69.969	-31 35 55.11	0.12	4	69.969				15088
18180	-14	5198	8.6	A3	46 31.212	0.25	2	71.973	-14 27 08.93	0.04	2	71.973				15089
18181	-25	13458	8.7	K2	18 46 34.675	0.14	4	69.570	-25 40 16.32	0.09	4	69.570				15090
18182	-16	5041	7.6	G5p	46 35.122	0.56	2	72.018	-16 46 51.79	0.62	2	72.018				15091
18183	-42	13657	7.40	K2	46 35.302	0.10	4	70.927	-42 16 09.30	0.04	4	70.927		25779		2243
18184	-80	861	8.7	F8	46 37.127	0.16	4	70.492	-80 14 21.93	0.15	4	70.492				20054
18184	SP				46 37.093	0.05	4	70.054	-80 14 22.26	0.26	4	70.054				20054
18185	-19	5182	6.42	A0	18 46 38.877	0.17	2	72.027	-19 12 01.11	0.17	2	72.027		25782		15092
18186	-1	3570	7.9	A0	46 40.518	0.00	2	71.985	-1 02 21.78	0.12	2	71.985			4174	15093
18187	-48	12745	8.0	K0	46 45.190	0.16	4	70.852	-48 26 15.81	0.06	4	70.852				2244
18188	-80	858	6.75	A0	46 45.575	0.07	6	70.140	-80 47 23.02	0.09	6	70.140	3496	25787	4175	33496
18188	SP				46 45.656	0.14	6	69.025	-80 47 22.79	0.25	6	69.025	3496	25787	4175	53496
18189	-10	4819	7.4	K0	18 46 46.280	0.01	2	72.131	-10 26 16.63	0.35	2	72.131				15094
18190	-20	5278	8.8	F8	46 49.128	0.16	5	70.287	-20 04 08.19	0.07	5	70.287				15095
18191	-52	11258	7.41	G5	46 54.782	0.19	4	70.495	-52 21 31.45	0.13	4	70.495		25797		15096
18192	-33	13612	8.7	F8	46 54.941	0.08	4	71.013	-33 34 55.96	0.08	4	71.013				15097
18193	-6	4923	8.7	K0	47 01.589	0.05	2	72.215	-6 00 06.56	0.10	2	72.215		25802		15098
18194	+0	4027	6.26	A0	18 47 04.301	0.07	2	72.160	+0 46 40.87	0.27	2	72.160		25805		15099
18195	-40	12852	8.0	K0	47 15.637	0.07	4	70.740	-40 27 53.71	0.08	4	70.740				2245
18196	-36	13049	8.7	G5	47 19.704	0.14	4	69.986	-36 31 37.69	0.03	4	69.986				15100
18197	-34	13150	8.8	K0	47 20.031	0.09	4	70.083	-34 25 35.21	0.15	4	70.083				15101
18198	-8	4723	8.6	K5	47 22.132	0.13	2	72.870	-8 26 39.91	0.25	2	72.870				15102
18199	-51	11792	7.29	G5	18 47 27.887	0.08	4	70.833	-51 34 46.51	0.07	4	70.833		25816		2246
18200	-3	4388	7.15	K2	47 30.868	0.22	2	72.509	-3 40 51.88	0.41	2	72.509		25821		15103
18201	-55	8882	7.8	K0	47 34.965	0.17	5	71.004	-55 12 25.35	0.09	5	71.004				15104
18202	-62	5983	4.42	B2	47 35.394	0.03	71	70.910	-62 14 51.40	0.05	68	70.860	704	25823	4177	30704
18203	-8	4726	7.0v	N3	47 37.138	0.37	2	72.173	-8 57 59.92	0.11	2	72.173		25824		15105
18204	-22	4880	8.07	K0	18 47 39.559	0.11	4	70.037	-22 19 32.33	0.09	4	70.037		25825		15106
18205	-13	5119	6.51	K2	47 41.593	0.10	6	69.557	-13 37 52.87	0.14	6	69.557	3498	25827	4178	33498
18206	-37	12906	7.5	K2	47 42.486	0.07	4	70.684	-37 18 26.83	0.10	4	70.684				15107
18207	-22	4881	6.24	F0	47 50.113	0.03	73	71.352	-22 13 17.04	0.03	71	71.305	1493	25835	4179	31493
18208	-33	13634	9.1	G0	47 50.175	0.11	4	70.805	-32 56 20.27	0.15	4	70.805				15108

18203 7.0m to 8.0m.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18209	+ 2	3693	8.7	F5	18 47 51.653	0.29	2	71.463	+ 2 53 02.95	0.54	2	71.463				15109
18210	-54	9114	8.6	G0	47 57.057	0.06	4	70.231	-54 21 43.03	0.16	4	70.231				15110
18211	-40	12861	8.5	K5	47 57.140	0.21	4	70.488	-39 54 50.00	0.07	4	70.488				15111
18212	- 0	3570	8.7	K5	48 04.619	--	1	73.354	- 0 25 13.36	--	1	73.354				15112
18213	-30	16323	8.1	K0	48 11.777	0.08	4	71.018	-30 10 41.19	0.17	4	71.018				15113
18214	-57	9228	8.2	A0	18 48 11.876	0.07	4	70.663	-57 15 24.29	0.26	4	70.663				15114
18215	-13	5123	8.2	K2	48 13.741	0.01	2	72.889	-13 30 24.03	0.48	2	72.889				15115
18216	-35	12977	7.7	K0	48 17.213	0.03	4	70.541	-35 26 35.99	0.10	4	70.541				15116
18217	-27	13284	7.36	K0	48 19.105	0.15	4	70.474	-27 13 26.86	0.10	4	70.474		25849		15117
18218	-17	5347	6.79	A2	48 25.940	0.08	2	72.011	-17 12 51.85	0.17	2	72.011		25852		15118
18219	-44	12927	7.14	K0	18 48 30.844	0.18	4	70.425	-44 35 48.91	0.08	4	70.425		25856		2247
18220	-65	3760	8.4	K0	48 32.962	0.16	4	69.922	-64 57 31.24	0.11	4	69.922				20055
18221	-52	11268	5.27	K0	48 41.868	0.14	7	71.150	-52 10 03.73	0.10	6	71.265	3499	25859	4185	33499
18222	- 3	4392	6.04	A3	48 44.545	0.18	6	70.534	- 3 22 40.70	0.22	6	70.534	3500	25862	4186	33500
18223	-35	12981	8.2	K5	48 54.217	0.18	4	70.434	-35 12 44.15	0.15	4	70.434				15120
18224	+ 3	3816	8.6	B9	18 48 55.609	0.16	2	70.451	+ 3 47 26.49	0.04	2	70.451				15121
18225	+ 1	3796	8.7	F5	48 57.439	0.21	2	71.988	+ 1 20 52.20	0.02	2	71.988				15122
18226	-16	5051	8.6	G5	48 57.599	0.06	2	72.014	-16 34 16.34	0.24	2	72.014				15123
18227	- 1	3582	8.8	B9	49 05.158	0.19	2	72.514	- 1 49 13.75	0.18	2	72.514				15124
18228	-74	1716	8.2	K5	49 08.032	0.16	4	70.010	-74 44 11.91	0.12	4	70.010				20056
18229	-38	13158	8.2	G5	18 49 11.869	0.10	4	70.000	-38 39 19.63	0.08	4	70.000				15125
18230	+ 4	3895	8.5	F0	49 14.005	0.14	3	72.427	+ 4 32 50.92	0.27	2	72.787				15126
18231	-49	12385	8.8	K0	49 14.045	0.05	4	70.062	-49 43 05.18	0.17	4	70.062				2248
18232	-45	12814	8.6	K0	49 14.066	0.13	4	70.015	-45 37 57.27	0.17	4	70.015				2249
18233	- 7	4747	8.7	A0	49 26.095	0.09	2	72.104	- 7 03 10.82	0.01	2	72.104				15127
18234	-61	6274	8.8	K0	18 49 27.567	0.11	4	69.994	-61 01 36.79	0.15	4	69.994				15128
18235	-30	16356	6.63	B8	49 29.100	0.13	6	70.007	-30 47 43.45	0.15	6	70.007	3502	25881		33502
18236	-75	1441	8.7	F5	49 33.519	0.07	4	69.620	-75 54 43.40	0.07	4	69.620				20057
18236 SP					49 33.433	0.22	4	70.193	-75 54 44.08	0.55	4	70.193				20057
18237	+13	3787	6.09	B9	49 44.329	0.08	6	71.687	+13 54 16.23	0.15	6	71.687	3503	25886		33503
18238	-28	15107	8.15	K0	18 49 49.818	0.08	4	69.008	-28 12 25.53	0.19	4	69.008				15129
18239	-71	2358	7.9	K0	49 49.892	0.15	4	70.006	-71 07 50.58	0.17	3	69.814				20058
18240	- 2	4765	8.7	G5	49 51.347	0.14	2	69.975	- 2 43 33.18	0.23	2	69.975				15130
18241	-19	5202	8.5	A0	50 00.778	0.01	2	71.504	-19 10 52.47	0.17	2	71.504				15131
18242	-15	5132	8.3	G5	50 03.882	0.12	2	71.977	-15 23 29.06	0.06	2	71.977		25891		15132
18243	-23	14794	8.5	K2	18 50 08.325	0.12	4	70.261	-23 25 45.20	0.06	4	70.261				15133
18244	- 4	4603	8.8	A0	50 10.299	0.16	2	71.510	- 4 49 31.53	0.06	2	71.510				15134
18245	-79	975	8.7	K5	50 10.846	0.15	4	70.845	-79 11 52.73	0.29	4	70.845				20059
18245 SP					50 10.840	0.12	4	69.990	-79 11 52.33	0.13	4	69.990				20059
18246	-11	4793	8.6	B8	50 12.418	0.32	2	71.959	-11 29 58.23	0.16	2	71.959				15135
18247	- 9	4876	6.26	A3	18 50 16.964	0.03	2	69.979	- 9 38 16.53	0.06	2	69.979				15136
18248	-64	3965	8.1	K2	50 17.495	0.09	4	69.985	-64 23 14.91	0.16	4	69.985		25897		20060
18249	-47	12605	7.2	A0	50 24.748	0.20	4	69.997	-47 19 33.46	0.19	4	69.997				2250
18250	-38	13177	8.9	K5	50 24.787	0.07	4	69.918	-38 02 21.72	0.12	4	69.918		25900		15137
18251	-69	2947	8.5	G5	50 25.164	0.14	4	70.310	-69 51 08.18	0.22	4	70.310				20061
18252	- 4	4606	8.7	K5	18 50 29.521	0.04	2	71.993	- 4 07 07.18	0.18	2	71.993				15138
18253	-70	2588	8.1	K0	50 30.448	0.11	4	70.341	-70 33 03.75	0.10	4	70.341				20062
18254	+ 1	3803	7.9	A3	50 35.986	0.19	2	71.954	+ 1 41 34.05	0.21	2	71.954				15139
18255	-21	5173	8.6	F5	50 39.522	0.08	4	69.006	-21 06 51.52	0.16	4	69.006				15140
18256	-31	16105	8.5	K2	50 47.133	0.06	4	69.027	-31 15 42.73	0.14	4	69.027				15141
18257	-50	12210	8.5	G5	18 50 51.828	0.17	4	70.486	-50 13 56.05	0.10	4	70.486				2251
18258	-53	9369	7.9	G5	50 57.295	0.12	4	69.931	-53 30 02.32	0.18	4	69.931				15142
18259	-43	12941	8.70	G5	51 08.003	0.22	4	70.003	-43 46 44.74	0.21	4	70.003		25917		2252
18260	-39	12976	8.6	K0	51 10.582	0.12	4	69.904	-39 37 32.99	0.07	4	69.904				15143
18261	-77	1328	8.9	K0	51 16.009	0.13	4	70.041	-77 37 53.88	0.08	4	70.041				20063
18261 SP					51 16.025	0.09	4	69.986	-77 37 54.01	0.22	4	69.986				20063
18262	-67	3602	8.5	K0	51 17.912	0.27	4	70.443	-67 44 05.50	0.07	4	70.443				20064
18263	- 4	4614	8.0	B9	51 20.858	0.02	2	69.970	- 4 41 25.47	0.05	2	69.970				15144
18264	-27	13348	7.76	B8	51 31.284	0.06	4	70.368	-26 57 14.07	0.14	4	70.368		25924		15145
18265	-56	9026	6.86	K5	51 33.825	0.10	6	69.374	-56 29 16.65	0.08	6	69.374	3504	25925		33504
18266	-13	5143	8.6	K5	18 51 35.682	0.05	2	71.958	-13 04 10.90	0.13	2	71.958				15146
18267	-65	3761	7.3	K0	51 44.150	0.08	4	70.406	-65 32 28.90	0.18	4	70.406				20065
18268	+ 2	3716	8.7	A0	51 44.395	0.16	2	71.967	+ 2 54 41.39	0.43	2	71.967				15147
18269	-67	3603	4.2v	*	51 48.240	0.12	6	71.499	-67 17 56.65	0.17	6	71.499	3505	25930	4191	33505
18270	-58	7529	8.4	K2	51 54.034	0.10	4	70.085	-58 39 37.13	0.11	4	70.085				15148
18271	-56	9029	8.4	K2	18 51 55.915	0.05	5	70.976	-56 35 23.52	0.31	5	70.976				15149
18272	+10	3720	6.83	K2	52 00.507	0.05	6	69.139	+10 44 39.02	0.13	6	69.139	3507	25937		33507
18273	-55	8915	8.6	K0	52 04.685	0.24	4	70.772	-55 49 28.10	0.15	4	70.772				15150
18274	-10	4863	6.85	B9	52 08.794	0.27	2	72.053	-10 34 50.09	0.11	2	72.053		25940		15151
18275	-26	13595	2.14	B3	52 09.950	0.04	22	71.401	-26 21 39.60	0.06	20	71.347	706	25941	4193	30706
18276	+ 3	3832	8.4	K2	18 52 15.114	0.01	2	72.481	+ 3 24 14.65	0.03	2	72.481				15152
18277	-34	13225	8.8	K0	52 17.236	0.10	4	70.038	-34 42 34.35	0.15	4	70.038				15153
18278	- 8	4761	8.3	K2	52 21.446	0.01	2	72.108	- 8 52 32.23	0.06	2	72.108				15154
18279	-36	13135	8.8	K5	52 25.645	0.10	4	70.042	-36 38 30.19	0.10	4	70.042				15155
18280	-16	5078	5.58	F5	52 38.137	0.05	25	71.634	-16 26 24.97	0.05	25	71.634	1495	25955	4194	31495

18269 4.2m to 5.1m. cF5p.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
18281	+22°	3524	4.56	*	18 52 38.143	0.06	6	70.659	+22° 34' 49.33	0.04	6	70.659	3508	25954		33508
18282	-41	13230	8.7	K0	52 42.875	0.15	4	70.451	-41 24 54.52	0.06	4	70.451				2253
18283	-48	12799	8.0	K2	52 51.603	0.14	5	71.254	-48 08 29.76	0.09	5	71.254				2254
18284	-16	5083	8.0	F5	52 51.777	0.04	2	72.507	-16 24 51.32	0.00	2	72.507				15156
18285	-3	4413	8.7	K0	52 52.018	0.08	2	72.183	-2 53 19.46	0.38	2	72.183				15157
18286	-18	5132	8.14	F0	18 52 54.299	0.20	2	73.313	-18 35 56.45	0.32	2	73.313		25961		15158
18287	-40	12934	8.0	K5	52 57.654	0.18	4	70.726	-40 38 52.53	0.12	4	70.726				2255
18288	-29	15524	7.14	A2	52 58.095	0.17	4	70.689	-29 32 32.25	0.13	4	70.689		25962		15159
18289	+6	3978	5.66	G5	53 01.140	0.11	6	71.253	+6 33 02.59	0.08	6	71.253	3509	25964		33509
18290	-50	12226	8.6	K5	53 02.349	0.09	4	71.081	-49 54 40.54	0.09	4	71.081				2256
18291	-26	13605	8.7	G0	18 53 10.449	0.09	4	71.195	-26 46 11.88	0.15	4	71.195				15160
18292	+0	4055	8.2	B3	53 13.157	--	1	69.360	+0 11 58.23	--	1	69.360				15161
18293	-37	12982	5.41	B5	53 17.121	0.08	2	71.392	-37 24 33.17	0.21	2	71.392		25973		2157
18294	-47	12623	8.01	K5	53 21.564	0.16	4	71.103	-47 38 41.99	0.07	4	71.103		25978		2257
18295	-33	13731	8.5	K5	53 22.018	0.29	2	70.084	-33 30 52.69	0.24	2	70.084				15162
18296	-35	13033	8.6	K5	18 53 25.951	0.04	3	70.797	-35 21 59.25	0.27	3	70.797				15163
18297	-78	1195	8.8	K0	53 36.389	0.28	4	70.456	-78 41 56.29	0.30	4	70.456				20066
18297 SP					53 36.429	0.15	4	70.016	-78 41 56.27	0.23	4	70.016				20066
18298	-32	14693	8.3	G5	53 36.659	0.07	4	71.388	-32 25 09.41	0.08	4	71.388				15164
18299	-24	14849	8.0	K0	53 39.541	0.08	4	69.917	-24 41 13.25	0.13	4	69.917				15165
18300	-44	12991	7.55	G5	18 53 40.744	0.07	5	71.600	-44 22 04.88	0.12	4	71.144		25987		2258
18301	-0	3599	8.2	A2	53 42.976	--	1	71.655	-0 52 12.61	--	1	71.655		25989		15166
18302	+4	3916	4.50	A5	53 44.049	0.03	79	70.853	+4 08 13.88	0.04	78	70.830	709	25991	4197	80709
18303	-1	3602	6.20	A0	53 46.814	0.12	6	70.645	-1 51 57.42	0.13	5	70.631	3510	25995		33510
18304	-28	15187	8.5	G0	53 57.973	0.07	4	71.267	-28 10 56.93	0.09	3	70.550				15170
18305	-25	13557	8.5	K5	18 54 04.747	--	1	69.630	-25 31 54.30	--	1	69.630				15172
18306	-46	12720	8.5	M0	54 07.605	0.29	3	70.691	-46 48 12.95	0.08	3	70.691				2259
18307	-5	4816	8.2	A0	54 07.978	--	1	72.577	-5 43 56.91	--	1	72.577				15173
18308	-60	7213	5.14	K0	54 09.796	0.14	6	70.635	-60 16 07.25	0.14	6	70.635	3511	26008	4199	33511
18309	-51	11846	8.5	K2	54 11.526	0.10	4	68.939	-51 13 35.78	0.12	4	68.939				2260
18310	-42	13778	9.0	G5	18 54 25.032	0.10	4	71.062	-42 24 25.22	0.17	4	71.062				2261
18311	-57	9278	8.5	K5	54 25.094	0.08	4	70.015	-56 58 50.14	0.12	4	70.015				15175
18312	-53	9402	5.03	B9	54 28.001	0.04	52	70.986	-53 00 23.31	0.04	52	70.986	708	26016	4201	30708
18313	-29	15557	8.8	K2	54 37.413	0.09	3	72.021	-29 46 04.82	0.30	2	71.322				15177
18314	-53	9406	9.0	K0	54 41.511	0.24	5	71.636	-52 57 28.19	0.31	5	71.636				15178
18315	-55	8935	8.9	G5	18 54 42.681	0.07	4	71.137	-54 57 31.44	0.12	4	71.137				15179
18316	-21	5201	3.61	K0	54 44.880	0.07	18	71.288	-21 10 27.11	0.04	18	71.288	710	26019	4202	30710
18317	-10	4883	8.4	K0	54 50.410	--	1	71.619	-10 05 00.89	--	1	71.619				15180
18318	-19	5244	8.5	K0	54 51.275	0.13	2	72.499	-19 46 34.69	0.23	2	72.499				15181
18319	-37	12995	7.5	K5	54 51.750	0.30	4	70.787	-37 23 05.61	0.14	4	70.787				15182
18320	-0	3607	7.8	K0	18 55 01.629	--	1	72.402	-0 35 37.14	--	1	72.402				15184
18321	-76	1288	8.9	K0	55 04.637	0.15	5	71.064	-76 39 53.63	0.35	4	70.474				20067
18321 SP					55 04.551	0.41	3	69.721	-76 39 53.66	0.06	2	69.533				20067
18322	-20	5344	6.73	OeS	55 12.806	0.14	4	70.774	-20 29 30.84	0.10	4	70.774		26034		15185
18323	-30	16477	9.0	K2	55 18.162	0.13	4	70.647	-30 19 51.51	0.09	4	70.647				15186
18324	-54	9194	8.7	G5	18 55 18.716	0.14	4	70.751	-53 54 20.85	0.07	4	70.751				15187
18325	-37	13001	4.87	F5	55 20.849	0.07	6	71.004	-37 10 30.22	0.11	6	71.004	3512	26038	4207	33512
18326	-60	7217	9.1	K2	55 25.602	0.26	4	71.283	-60 19 23.00	0.13	4	71.283				15188
18327	-30	16479	8.6	K0	55 27.036	0.09	4	70.494	-30 51 37.60	0.16	4	70.494				15189
18328	-58	7544	7.5	K0	55 34.490	0.31	4	71.088	-58 02 49.46	0.19	4	71.088				15190
18329	-45	12904	9.0	K2	18 55 39.843	0.06	4	70.733	-45 45 26.16	0.12	4	70.733				2262
18330	-14	5242	9.1	F5	55 46.090	0.15	2	71.974	-14 50 13.88	0.22	2	71.974				15191
18331	-0	3609	9.0	K2	55 48.442	0.14	2	71.474	-0 04 52.35	0.44	2	71.474				15192
18332	-82	755	8.2	G0	55 48.938	0.14	4	70.410	-82 33 58.27	0.10	4	70.410				20068
18332 SP					55 48.842	0.23	4	69.061	-82 33 58.63	0.12	4	69.061				20068
18333	-66	3405	8.1	K2	18 55 55.305	0.10	4	70.399	-66 28 23.66	0.19	4	70.399				20069
18334	-49	12447	8.7	K2	56 11.362	0.13	4	70.664	-49 31 17.62	0.12	4	70.664				2263
18335	-4	4650	7.4	F8	56 13.906	0.07	2	71.974	-4 47 45.32	0.52	2	71.974				15193
18336	-59	7421	8.7	K0	56 22.152	0.06	4	70.501	-59 32 22.46	0.16	4	70.501				15194
18337	-34	13301	8.0	K0	56 26.301	0.20	4	70.959	-34 32 25.36	0.12	4	70.959				15195
18338	-43	13020	7.76	G5	18 56 26.453	0.09	4	70.463	-43 25 01.74	0.15	4	70.463		26062		2264
18339	-8	4795	8.0	K2	56 32.753	--	1	72.362	-8 13 41.65	--	1	72.362				15197
18340	-34	13302	8.1	G5	56 33.237	0.15	5	71.317	-34 00 41.05	0.17	5	71.317				15198
18341	-22	4938	8.3	K0	56 36.270	0.16	4	71.284	-21 53 53.09	0.12	4	71.284				15200
18342	-63	4466	8.8	G5	56 39.407	0.07	4	71.402	-63 25 13.94	0.13	4	71.402				15201
18343	-10	4901	8.4	K0	18 56 40.803	--	1	73.292	-10 39 00.45	--	1	73.292				15202
18344	-24	14904	8.4	B8	56 50.632	0.25	4	69.916	-24 28 06.78	0.16	4	69.916				15204
18345	-28	15248	7.71	A2	56 51.896	0.11	4	70.697	-28 07 15.05	0.08	4	70.697		26077		15205
18346	-15	5166	8.8	A5	56 52.219	--	1	73.420	-15 22 58.68	--	1	71.737		26083		15206
18347	-3	4439	7.41	A0	57 00.528	--	1	71.737	-2 54 19.66	--	1	71.737				15207
18348	+14	3736	4.21	K0	18 57 21.047	0.04	48	71.004	+14 59 54.96	0.06	47	70.953	712	26091	4216	80712
18349	-39	13054	7.7	K0	57 26.122	0.08	4	70.757	-39 08 38.60	0.19	4	70.757				15208
18350	-26	13692	8.5	K0	57 36.386	0.11	4	70.718	-26 44 31.79	0.07	4	70.718				15209
18351	-19	5262	7.7	K2	57 39.146	--	1	73.354	-19 43 45.57	--	1	73.354				15210
18352	+2	3751	8.2	K2	57 43.378	0.03	2	69.953	+2 52 45.87	0.17	2	69.953				15211

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18353	-4	4660	8.3	A0	18 57 49.374	0.19	2	72.904	-4 23 46.10	0.29	2	72.904				15213
18354	-42	13835	8.57	G5	57 50.911	0.26	5	71.398	-42 53 45.34	0.14	5	71.398				2265
18355	-36	13225	8.6	K0	57 51.461	0.21	4	70.736	-36 02 25.17	0.04	4	70.736		26106		15214
18356	+1	3851	8.2	K0	58 17.980	0.15	2	70.514	+1 18 41.88	0.28	2	70.514				15215
18357	-23	14953	7.74	G5	58 22.379	0.08	4	70.015	-23 18 00.44	0.09	4	70.015		26119		15216
18358	-63	4467	7.34	G5	18 58 22.951	0.31	4	69.900	-62 58 23.54	0.26	4	69.900		26120		15217
18359	-13	5185	8.5	A0	58 24.697	0.05	2	72.033	-13 23 36.56	0.75	2	72.033				15218
18360	-61	6303	8.6	K0	58 25.577	0.13	4	69.502	-61 20 20.21	0.16	4	69.502				15219
18361	-38	13279	8.9	G5	58 28.955	0.18	4	70.595	-38 01 30.41	0.06	4	70.595				15220
18362	+3	3870	9.0	G0	58 31.967	0.12	2	72.157	+4 02 07.56	0.17	2	72.157				15221
18363	-32	14781	7.6	G5	18 58 37.534	0.11	4	70.612	-32 40 11.09	0.20	4	70.612				15222
18364	-15	5185	6.38	G5	58 42.086	0.23	3	71.797	-15 21 17.59	0.20	3	71.797		26132		15223
18365	-10	4918	8.8	B9	58 49.936	0.25	2	71.995	-10 46 34.89	0.09	2	71.995				15224
18366	-68	3181	9.0	K0	58 56.238	0.09	4	69.983	-68 37 35.20	0.17	4	69.983				20070
18367	-73	1977	8.2	A0	58 56.592	0.17	4	70.889	-73 51 12.92	0.14	4	70.889				20071
18368	-57	9295	7.08	K0	18 58 59.022	0.12	6	70.084	-57 04 07.32	0.11	6	70.084	3516	26140		33516
18369	-35	13127	8.4	F0	59 06.370	0.06	4	70.428	-35 13 16.73	0.08	4	70.428				15225
18370	-29	15629	8.0	F0	59 09.564	0.27	4	69.566	-29 24 52.16	0.06	4	69.566				15226
18371	-31	16267	8.0	K0	59 10.427	0.09	4	70.759	-31 00 38.13	0.19	4	70.759				15227
18372	-35	13128	9.0	K0	59 11.498	0.21	4	70.115	-35 21 15.94	0.19	4	70.115				15228
18373	-17	5427	8.2	G5	18 59 12.634	0.06	2	71.510	-16 55 42.03	0.05	2	71.510				15229
18374	-6	5009	7.8	K0	59 14.936	0.08	2	71.540	-6 15 16.01	0.25	2	71.540				15230
18375	+26	3429	5.50	B3	59 15.389	0.10	6	69.741	+26 13 08.86	0.09	6	69.741	3518	26151		33518
18376	-25	13651	8.2	K0	59 19.203	0.11	4	70.808	-25 45 42.14	0.18	4	70.808				15231
18377	-36	13249	7.9	M0	59 22.027	0.04	4	70.485	-36 43 52.22	0.13	4	70.485				15232
18378	-55	8965	8.9	G5	18 59 25.849	0.17	4	70.034	-55 50 21.65	0.12	4	70.034				15233
18379	-56	9074	8.7	K0	59 31.764	0.12	4	70.267	-56 23 20.86	0.18	4	70.267				15234
18380	-42	13856	9.1	K0	59 34.243	0.06	4	70.041	-41 57 41.26	0.09	4	70.041				2266
18381	-42	13855	4.85	A0	59 34.647	0.12	6	69.883	-42 10 06.22	0.08	6	69.883	3519	26165		33519
18382	-10	4926	6.68	B5	59 48.105	0.12	4	71.343	-10 47 42.33	0.11	4	71.343	3520	26175	4221	15235
18383	-9	4963	8.1	K2	18 59 51.513	0.08	2	71.956	-9 00 03.74	0.22	2	71.956				15236
18384	-27	13487	8.8	A0	59 53.089	0.10	4	70.683	-27 25 38.30	0.08	4	70.683				15237
18385	-70	2598	8.4	K2	19 00 00.809	0.19	4	70.014	-70 08 31.11	0.08	4	70.014				20072
18386	-35	13145	7.8	K2	00 19.795	0.20	4	70.086	-34 58 30.23	0.11	4	70.086				15238
18387	-29	15649	8.6	A0	00 23.072	0.15	4	70.605	-29 41 18.08	0.11	3	69.667				15239
18388	-51	11899	8.5	K2	19 00 26.065	0.10	4	69.528	-51 15 03.17	0.08	4	69.528				2267
18389	-11	4852	7.02	A0	00 26.329	0.03	2	69.954	-11 15 49.35	0.37	2	69.954		26194		15240
18390	-58	7568	8.2	K2	00 26.652	0.16	4	70.647	-58 15 03.23	0.31	4	70.647				15241
18391	-63	4471	8.6	G5	00 28.564	0.23	4	70.392	-63 25 48.36	0.09	4	70.392				15242
18392	-12	5259	7.7	B9	00 33.764	0.01	2	71.506	-12 47 02.04	0.05	2	71.506				15243
18393	-48	12872	9.0	K2	19 00 37.147	0.18	4	70.362	-48 09 12.60	0.07	4	70.362				2268
18394	-71	2363	8.8	K5	00 39.812	0.15	4	70.932	-71 39 30.02	0.23	4	70.932				20073
18395	-3	4466	7.7	K2	00 41.001	0.07	2	70.447	-2 51 46.11	0.18	2	70.447				15244
18396	+19	3888	6.25	K0	00 41.768	0.03	6	68.951	+19 35 12.76	0.15	6	68.951	3521	26198	4222	33521
18397	-49	12481	9.0	K2	00 45.383	0.19	4	70.505	-49 43 51.00	0.09	4	70.505				2269
18398	+0	4088	7.06	K2	19 00 46.178	0.17	2	71.462	+0 30 06.44	0.29	2	71.462		26199		15245
18399	-50	12308	8.5	K0	00 57.932	0.07	3	69.487	-50 24 28.83	0.09	3	69.487				2270
18400	-47	12710	8.0	K0	01 04.007	0.21	4	70.520	-47 37 27.26	0.14	4	70.520				2271
18401	-36	13266	8.4	K5	01 05.382	0.04	3	70.533	-36 11 30.97	0.22	3	70.533				15246
18402	-21	5231	8.8	K0	01 11.930	0.17	4	69.527	-20 52 33.99	0.09	4	69.527				15247
18403	-17	5446	8.9	B8	19 01 14.265	0.10	2	71.532	-17 50 09.03	0.22	2	71.532				15248
18404	-2	4839	8.3	B9	01 14.334	0.11	2	71.978	-1 55 47.16	0.36	2	71.978				15249
18405	+4	3959	8.4	K2	01 16.861	0.03	2	71.976	+4 59 40.56	0.03	2	71.976				15250
18406	-39	13093	9.0	K0	01 20.369	0.08	4	70.023	-38 54 47.10	0.12	4	70.023				15251
18407	-20	5388	8.6	B8	01 20.901	0.10	4	69.071	-20 13 04.46	0.08	4	69.071				15253
18408*	-21	5233	6.87	G0	19 01 20.923	0.07	4	69.568	-21 36 23.94	0.11	4	69.568		26214		15252
18409	-14	5277	8.4	K5	01 24.235	0.13	2	71.521	-14 24 32.00	0.12	2	71.521				15254
18410	-1	3635	8.1	G5	01 24.648	0.21	2	71.473	-0 52 09.99	0.51	2	71.473		26218		15255
18411	-60	7253	8.8	K2	01 32.464	0.10	4	70.455	-60 11 08.62	0.02	4	70.455				15256
18412	+2	3769	8.2	B8	01 37.391	--	1	72.326	+2 27 03.73	--	1	72.326				15257
18413	-0	3638	8.1	K0	19 01 40.169	0.19	2	70.479	-0 36 16.90	0.05	2	70.479			4224	15258
18414	-25	13695	8.60	K2	01 45.323	0.09	4	71.240	-24 53 30.09	0.18	4	71.240		26227		15259
18415	-57	9309	8.5	K2	01 50.357	0.08	4	70.716	-57 21 21.57	0.21	4	70.716				15260
18416	-18	5193	8.8	A2	01 52.076	0.25	2	71.557	-17 52 39.57	0.21	2	71.557				15261
18417	-18	5191	8.8	B8	01 52.330	0.06	2	71.504	-18 47 00.70	0.31	2	71.504				15262
18418	-67	3612	8.5	K0	19 02 04.252	0.34	4	69.980	-66 54 13.70	0.27	4	69.980				20074
18419	-26	13766	7.5	K2	02 06.049	0.17	5	70.687	-26 12 54.63	0.10	5	70.687				15263
18420	-46	12798	8.0	G5	02 07.062	0.21	4	70.459	-46 06 25.36	0.00	4	70.459				2272
18421	-53	9470	8.3	K0	02 09.079	0.11	4	70.307	-53 37 08.54	0.23	4	70.307				15264
18422	-38	13323	9.2	G0	02 14.875	0.08	4	70.812	-37 58 28.77	0.13	4	70.812				15265
18423	-35	13184	7.8	K2	19 02 17.735	0.10	5	70.586	-35 26 52.21	0.10	5	70.586				15266
18424	-4	4683	7.15	K0	02 18.004	0.13	2	71.510	-4 07 00.96	0.27	2	71.510		26235		15267
18425	-7	4844	8.5	B8	02 18.260	0.13	2	72.166	-7 13 05.39	0.22	2	72.166		26236		15268
18426	+0	4096	8.9	K0	02 22.102	0.23	2	72.476	+0 09 23.87	0.11	2	72.476				15269
18427	-33	13903	7.49	K0	02 22.319	0.11	4	70.766	-33 51 37.28	0.08	4	70.766		26239		15270

18408 A 11989, 7.5m-7.8m, 1.2, binary.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
18428	-45	12977	8.9	K2	19 02 36.327	0.04	4	71.085	-45 26 32.20	0.11	4	71.085				2273
18429	-29	15692	6.92	B8	02 37.339	0.07	4	71.206	-29 09 29.16	0.22	3	70.469		26244		15271
18430	-15	5223	5.90	A0p	02 49.338	0.12	6	69.037	-15 44 14.49	0.14	6	69.037	3522	26259		33522
18431	-79	995	8.2	K0	02 49.581	0.19	4	70.992	-79 34 13.83	0.26	4	70.992				20075
18431	SP				02 49.567	0.10	4	70.189	-79 34 13.75	0.12	4	70.189				20075
18432	+13	3899	3.02	A0	19 03 06.640	0.06	26	70.978	+13 47 13.92	0.08	23	70.942	716	26270	4228	30716
18433	-52	11361	8.8	K2	03 07.318	0.21	4	70.198	-52 00 34.14	0.27	4	70.198				15272
18434	-3	4476	8.2	K0	03 08.225	0.15	2	72.498	-3 43 01.17	0.20	2	72.498				15273
18435	-48	12901	6.10	A0	03 09.672	0.10	6	69.969	-48 22 37.32	0.12	6	69.969	3523	26272	4229	33523
18436	-9	4986	7.8	F5	03 10.230	0.21	2	71.993	-8 59 04.11	0.03	2	71.993				15274
18437	-27	13551	7.17	B8	19 03 12.285	0.05	4	70.095	-27 21 52.89	0.07	4	70.095		26274		15275
18438	+4	3969	6.91	F0	03 13.965	0.10	2	72.502	+4 12 04.29	0.30	2	72.502		26275		15276
18439	-41	13323	7.46	M3	03 14.300	0.16	4	70.413	-41 37 04.37	0.16	4	70.413		26276		2274
18440	-40	13045	9.0	K0	03 15.507	0.08	4	70.573	-40 35 46.66	0.08	4	70.573				2275
18441	-55	8991	8.6	K2	03 20.123	0.18	4	70.767	-55 49 29.95	0.18	4	70.767				15277
18442	-23	15043	7.5	K0	19 03 30.896	0.10	4	70.716	-23 19 53.10	0.13	4	70.716				15278
18443	-65	3769	9.1	G0	03 31.742	0.08	4	69.486	-65 14 13.57	0.23	4	69.486				20076
18444	-44	13121	7.91	K2	03 32.105	0.06	4	70.837	-44 18 14.73	0.08	4	70.837		26284		2276
18445	+3	3894	8.4	K2	03 35.210	0.22	3	72.438	+3 39 43.13	0.12	3	72.438				15279
18446	-5	4876	3.55	B9	03 35.670	0.07	16	71.755	-4 57 34.73	0.08	16	71.755	717	26285	4230	30717
18447	-10	4949	8.9	A0	19 03 40.477	0.20	2	72.572	-9 52 33.31	0.14	2	72.572				15280
18448	-39	13117	8.9	M4	03 43.117	0.14	4	70.830	-39 12 39.03	0.11	4	70.830				15281
18449	-30	16657	8.6	K2	03 44.105	0.16	4	70.263	-30 01 54.50	0.10	4	70.263				15282
18450	-27	13564	3.42	K0	03 49.057	0.07	16	70.863	-27 44 48.30	0.08	16	70.863	1496	26291	4232	31496
18451	-40	13052	9.0	K2	03 52.216	0.16	4	70.945	-40 40 44.20	0.07	4	70.945				2277
18452	-12	5279	8.8	B8	19 03 56.334	--	1	72.465	-12 28 54.41	--	1	72.465				15283
18453	-29	15719	8.6	G5	03 56.850	0.14	4	69.583	-29 14 21.26	0.09	4	69.583				15284
18454	-75	1461	8.5	K2	03 59.502	0.20	4	70.485	-75 45 21.03	0.07	4	70.485				20077
18454	SP				03 59.474	0.13	4	70.471	-75 45 20.32	0.24	4	70.471				20077
18455	-16	5153	5.93	B8	03 59.608	0.04	2	72.173	-16 18 27.79	0.11	2	72.173		26299		15285
18456	-1	3649	6.72	B8	19 03 59.779	0.03	78	71.320	-1 25 27.53	0.04	77	71.293	1497	26300	4233	81497
18457	-24	15022	8.0	A0	04 11.565	0.14	4	70.957	-24 36 09.49	0.13	3	70.136				15287
18458	-67	3614	8.2	K0	04 13.065	0.10	4	69.973	-67 37 12.55	0.16	4	69.973				20078
18459	-71	2366	6.78	K0	04 22.229	0.10	6	69.316	-71 37 44.87	0.12	6	69.316	3524	26309		33524
18459	SP				04 22.296	0.09	35	71.483	-71 37 45.46	0.12	34	71.490	3524	26309		53524
18460	-31	16364	8.4	M1	19 04 23.385	0.10	4	69.957	-31 45 02.72	0.02	4	69.957				15288
18461	-61	6337	8.9	K0	04 23.533	0.19	4	69.926	-61 46 55.03	0.06	4	69.926				15289
18462	-32	14875	7.8	G5	04 34.364	0.21	4	70.408	-32 39 32.55	0.01	4	70.408				15290
18463	-5	4877	8.30	K2	04 34.924	0.19	2	72.563	-4 58 37.65	0.03	2	72.563		26312		15291
18464	-49	12511	8.0	K0	04 35.839	0.11	4	70.528	-49 23 25.40	0.19	4	70.528				2278
18465	+0	4106	6.44	B9	19 04 35.938	0.17	2	70.492	+0 33 43.96	0.15	2	70.492		26314		15292
18466	+10	3787	5.10	B8	04 37.312	0.17	6	71.615	+10 59 33.41	0.15	6	71.615	3525	26315	4235	33525
18467	+28	3193	5.46	A5	04 38.711	0.29	2	71.580	+28 32 57.22	0.18	2	71.580	1498	26317		31498
18468	-54	9258	8.8	G0	04 48.988	0.10	4	69.996	-54 07 04.14	0.12	4	69.996				15293
18469	-25	13750	7.53	G5	04 49.928	0.17	3	71.515	-25 46 54.46	0.29	2	70.563		26321		15294
18470	-1	3657	7.5	M0	19 04 51.333	0.14	2	71.948	-1 12 16.81	0.01	2	71.948				15295
18471	-15	5242	8.8	B9	04 56.216	--	1	71.688	-15 12 05.33	--	1	71.688				15298
18472	-3	4485	8.2	A3	05 00.814	--	1	71.696	-2 53 53.75	--	1	71.696				15299
18473	-27	13590	7.02	G5	05 01.872	0.11	4	70.756	-26 54 51.77	0.09	4	70.756		26327		15300
18474	-45	12998	7.9	K0	05 04.722	0.08	4	70.490	-45 09 22.86	0.04	4	70.490				2279
18475	-8	4859	6.96	K0	19 05 18.330	--	1	70.742	-7 55 38.39	--	1	70.742		26333		15301
18476	-31	16382	8.0	K0	05 21.223	0.12	5	71.458	-31 10 29.51	0.14	5	71.458				15302
18477	-33	13955	8.3	K0	05 33.227	0.06	4	70.516	-33 26 02.16	0.22	4	70.516				15303
18478	-44	13146	8.53	K0	05 35.509	0.20	4	70.743	-43 53 51.61	0.15	4	70.743		26342		2280
18479	-21	5266	7.9	K0	05 35.550	0.11	4	70.764	-21 04 17.02	0.09	4	70.764		26343		15304
18480	-78	1217	6.90	K2	19 05 37.505	0.14	6	69.642	-77 56 49.86	0.24	6	69.642	3527	26344		33527
18480	SP				05 37.508	0.22	6	69.240	-77 56 50.00	0.32	6	69.240	3527	26344		53527
18481	-69	2960	8.9	G5	05 38.375	0.19	4	69.456	-69 17 59.72	0.23	4	69.456				20079
18482	-68	3187	8.4	K5	05 38.675	0.07	4	71.175	-68 28 53.54	0.10	4	71.175				20080
18483	-11	4879	8.8	G0	05 43.148	0.17	2	71.732	-11 15 57.48	0.00	2	71.732				15305
18484	-41	13349	8.0	M0	19 05 43.275	0.08	4	70.754	-41 20 41.67	0.22	4	70.754				2281
18485	-28	15432	7.8	K0	05 47.240	0.12	4	71.182	-28 49 15.81	0.07	4	71.182				15306
18486	-44	13150	8.17	F2	05 48.217	0.16	4	71.318	-44 17 46.60	0.23	4	71.318		26350		2282
18487	-59	7453	8.1	K5	05 48.513	0.11	4	69.910	-59 37 47.06	0.10	4	69.910				15307
18488	-17	5493	8.2	K0	06 02.761	0.22	2	71.679	-17 36 55.80	0.43	2	71.679				15308
18489	-38	13350	4.12	A2	19 06 04.498	0.04	55	71.433	-37 59 05.47	0.03	54	71.412	718	26360	4239	30718
18490	-34	13430	8.4	K2	06 10.253	0.12	4	70.344	-34 22 55.29	0.08	4	70.344				15309
18491	-30	16699	8.9	K0	06 12.595	0.13	3	71.135	-30 43 33.33	0.19	3	71.135				15310
18492	-36	13355	6.58	B9	06 15.786	0.07	6	70.933	-36 14 45.78	0.24	6	70.933	3528	26368		33528
18493	-2	4872	6.79	K0	06 15.839	--	1	71.507	-2 22 05.54	--	1	71.507		26369		15311
18494	-10	4971	8.4	B8	19 06 20.793	--	1	71.619	-9 55 43.15	--	1	71.619				15312
18495	+16	3758	6.46	F5	06 25.790	0.09	8	70.342	+16 46 16.73	0.18	7	70.325	3529	26374		33529
18496	-42	13933	5.86	B5	06 26.475	0.08	6	71.833	-41 58 25.70	0.14	6	71.833		26375		21158
18497	-35	13248	8.5	M0	06 27.207	0.08	4	71.400	-34 59 14.07	0.08	4	71.400				15313
18498	-22	4992	8.7	K0	06 30.717	0.03	4	69.634	-22 27 32.12	0.10	4	69.634				15314

18455 A 12039, 9.9m, 6"4, 2".

CATALOG OF 23,001 STARS FOR 1950.0

491

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18499	+ 5	4040	5.37	F2	19 06 32.914	0.11	6	70.342	+ 5 59 33.89	0.14	6	70.342	3530	26379	4240	33530
18500	-23	15106	8.0	A0	06 33.477	0.08	4	69.795	-23 16 20.70	0.15	4	69.795				15315
18501	- 6	5046	8.9	A2	06 33.981	--	1	70.641	- 6 08 11.06	--	1	70.641				15316
18502	-13	5249	7.5	K0	06 35.162	--	1	71.598	-13 32 15.36	--	1	71.598				15317
18503	-62	6046	8.3	K2	06 38.577	0.29	4	70.489	-62 01 57.14	0.14	4	70.489				15318
18504*	-21	5275	3.02	F2	19 06 47.446	0.03	62	71.390	-21 06 18.18	0.04	60	71.322	720	26386	4241	30720
18505	-39	13151	8.8	K2	06 58.257	0.17	4	70.430	-39 16 07.59	0.03	4	70.430				15319
18506	-16	5178	9.0	A5	07 00.682	--	1	71.655	-16 43 29.36	--	1	71.655				15320
18507	+ 1	3911	8.74	G5	07 09.711	--	1	71.696	+ 1 09 13.94	--	1	71.696		26393		15321
18508	-77	1347	7.50	A3	07 09.884	0.09	4	70.405	-77 07 57.53	0.04	4	70.405		26394		20081
18508 SP					19 07 09.806	0.08	4	70.015	-77 07 57.75	0.25	4	70.015		26394		20081
18509	-73	1992	8.3	K2	07 09.976	0.14	4	70.054	-73 23 55.62	0.11	4	70.054				20082
18510	-48	12942	8.5	G5	07 10.354	0.11	4	70.779	-48 51 41.44	0.08	4	70.779				2283
18511	+ 2	3801	8.6	K2	07 11.356	--	1	71.677	+ 2 23 25.10	--	1	71.677				15322
18512	-56	9109	7.25	K5	07 12.296	0.20	4	69.052	-56 23 22.47	0.19	4	69.052		26395		15323
18513	-42	13951	9.1	K0	19 07 14.262	0.07	4	71.371	-42 03 50.76	0.17	4	71.371				2284
18514	-38	13358	9.0	K2	07 17.598	0.14	4	70.747	-38 30 57.20	0.04	4	70.747				15324
18515	- 9	5022	8.2	A0	07 22.134	0.07	2	71.072	- 9 14 16.41	0.17	2	71.072				15325
18516	-47	12774	7.5	K2	07 28.290	0.12	4	70.565	-47 41 23.68	0.14	4	70.565				2285
18517	-32	14925	8.9	G5	07 34.236	0.06	4	70.568	-32 28 28.77	0.13	4	70.568				15326
18518	-24	15084	7.6	K0	19 07 57.344	0.16	4	70.200	-24 16 04.90	0.07	4	70.200				15327
18519	-37	13082	8.9	G5	07 57.674	0.16	4	70.524	-37 17 40.58	0.12	4	70.524				15328
18520	+ 0	4124	8.8	F5	08 00.063	0.20	2	72.191	+ 0 36 24.17	0.15	2	72.191				15329
18521	- 0	3666	7.9	K5	08 00.108	0.17	2	71.540	- 0 46 43.04	0.04	2	71.540				15330
18522	-15	5259	8.0	M3	08 00.552	0.09	2	71.481	-15 09 39.18	0.13	2	71.481				15331
18523	+ 3	3928	8.5	K5	19 08 03.025	0.47	2	72.001	+ 3 22 12.66	0.03	2	72.001				15332
18524	-28	15472	8.59	K0	08 03.428	0.12	4	69.916	-28 37 02.52	0.19	4	69.916	26409			15333
18525	-16	5187	7.6	K0	08 13.528	0.26	2	71.980	-16 00 12.86	0.01	2	71.980	26413			15334
18526	-50	12368	8.0	K2	08 15.771	0.09	4	69.504	-50 19 39.60	0.10	4	69.504				2286
18527	-46	12856	8.2	K2	08 16.682	0.13	4	69.982	-46 13 42.20	0.08	4	69.982				2287
18528	- 6	5054	6.66	A0	19 08 16.994	0.08	2	71.691	- 6 42 18.04	0.07	2	71.691	26414			15335
18529	-52	11382	8.56	F8	08 22.081	0.15	3	70.912	-51 53 45.94	0.02	3	70.912	26417			2288
18530	-58	7591	7.6	G5	08 29.819	0.20	4	70.043	-58 21 00.74	0.13	4	70.043				15336
18531	-59	7461	8.7	F8	08 31.371	0.12	4	70.533	-59 46 24.83	0.10	4	70.533				15337
18532	-61	6350	8.7	K5	08 38.814	0.12	4	71.240	-60 56 01.96	0.18	4	71.240				15338
18533	+ 3	3934	7.7	G5	19 08 46.186	0.29	2	71.484	+ 4 06 27.11	0.31	2	71.484				15339
18534	-19	5336	8.6	G0	08 49.361	0.46	2	71.448	-19 16 24.50	0.46	2	71.448				15340
18535	-54	9276	8.6	G5	08 54.410	0.09	4	71.375	-54 34 06.61	0.11	4	71.375				15341
18536	-20	5432	8.2	K0	08 54.705	0.03	4	69.932	-20 27 54.12	0.23	4	69.932				15342
18537	- 3	4505	8.0	B8	09 02.283	0.14	2	71.032	- 3 08 58.56	0.15	2	71.032				15343
18538	-36	13401	8.6	K5	19 09 07.557	0.07	4	70.037	-36 40 09.01	0.07	4	70.037				15344
18539	-62	6049	8.6	G5	09 08.000	0.22	4	70.251	-62 39 56.72	0.16	4	70.251				15345
18540	-21	5292	6.42	K0	09 28.851	0.18	4	69.959	-21 44 35.07	0.15	4	69.959	26445			15346
18541	- 9	5033	8.7	A0	09 35.903	0.20	2	70.051	- 9 01 14.58	0.24	2	70.051				15347
18542	-76	1319	6.78	A2	09 36.889	0.03	95	71.069	-75 53 13.65	0.04	92	71.053	1499	26451	4245	31499
18542 SP					19 09 36.903	0.06	34	70.975	-75 53 13.78	0.09	32	70.963	1499	26451	4245	51499
18543	-25	13832	8.6	G0	09 38.572	0.11	4	69.522	-25 45 15.64	0.10	4	69.522				15348
18544	- 4	4719	8.3	K0	09 43.687	0.09	2	71.993	- 4 32 52.66	0.04	2	71.993	26455			15349
18545	- 5	4903	7.5	F8	09 47.556	0.04	2	72.139	- 5 29 57.00	0.10	2	72.139				15350
18546	-19	5344	8.5	F5	09 48.296	0.13	2	72.181	-19 19 11.48	0.14	2	72.181	26457			15351
18547	-43	13201	8.34	K0	19 09 49.142	0.11	4	70.460	-43 04 13.96	0.07	4	70.460	26458			2289
18548	-27	13682	8.82	K0	09 52.663	0.05	4	70.237	-27 05 05.62	0.10	4	70.237	26460			15352
18549	-11	4904	7.8	K0	09 56.970	0.18	2	72.153	-11 38 08.18	0.04	2	72.153				15353
18550	- 8	4887	5.37	B3	09 57.985	0.02	74	70.936	- 8 01 29.05	0.04	73	70.902	1500	26461	4247	81500
18551	-64	3981	8.1	K5	10 07.916	0.15	4	70.018	-64 37 07.80	0.07	4	70.018				20083
18552	- 7	4888	8.4	K0	19 10 08.132	0.02	2	71.997	- 7 34 45.39	0.06	2	71.997				15354
18553	-26	13936	5.86	K0	10 08.936	0.06	6	68.927	-25 59 32.69	0.19	6	68.927	3533	26463	4248	33533
18554	-31	16464	8.0	G5	10 12.549	0.14	4	71.150	-31 46 41.12	0.12	4	71.150				15355
18555	-42	14011	8.5	K0	10 25.259	0.12	3	70.403	-42 39 21.65	0.08	3	70.403				2290
18556	-12	5311	5.62	K0	10 27.821	0.10	6	69.882	-12 22 05.40	0.11	6	69.882	3534	26469	4249	33534
18557	-27	13692	8.6	K2	19 10 32.522	0.08	4	71.726	-27 28 49.75	0.09	3	71.163				15356
18558	-58	7595	8.8	K2	10 34.555	0.16	5	71.676	-58 01 21.21	0.11	4	71.239				15357
18559	-61	6356	8.5	G5	10 35.128	0.10	4	71.671	-61 31 39.31	0.12	4	71.671				15358
18560	-33	14035	8.5	K2	10 45.173	0.15	4	70.506	-33 31 21.74	0.13	4	70.506				15359
18561	-27	13699	7.04	F0	10 50.346	0.07	4	70.503	-26 57 43.20	0.16	4	70.503	26478	4251		15360
18562*	-10	4994	8.4	F8	19 10 50.488	--	1	70.660	-10 26 07.99	--	1	70.660				15361
18563	-23	15179	8.1	K2	10 57.363	0.17	3	69.905	-23 01 06.22	0.25	3	69.905				15362
18564	-14	5339	7.27	K0	11 10.340	--	1	71.696	-14 07 32.95	--	1	71.696	26489			15363
18565	+ 2	3824	5.10	B8	11 11.404	0.09	6	70.174	+ 2 12 25.95	0.09	6	70.174	3537	26490	4255	33537
18566	- 2	4897	8.7	B9	11 11.840	--	1	71.718	- 2 55 18.39	--	1	71.718				15364
18567	- 6	5072	8.8	A3	19 11 13.201	--	1	71.748	- 5 58 58.10	--	1	71.748				15365
18568	-53	9501	7.80	F5	11 13.775	0.17	4	70.766	-53 27 20.79	0.06	4	70.766	26492			15366
18569	-65	3781	9.1	A2	11 16.467	0.07	4	70.560	-64 54 36.54	0.01	4	70.560				20084
18570	-36	13433	8.5	K2	11 17.627	0.08	4	70.706	-36 39 40.37	0.14	4	70.706				15367
18571	- 0	3679	8.4	G5	11 24.898	--	1	71.712	+ 0 02 19.08	--	1	71.712				15368

18504 3.7m-3.8m, 0°1; 6.2m, 0°4, 122°.

18562 8.9m-10.4m, 0°5, 148°.

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*	
18572	-67	3624	8.9	K0	19 11 25.989	0.09	4	71.326	-67 23 41.95	0.13	4	71.326				20085	
18573	-40	13137	8.0	K0	11 26.455	0.08	4	70.780	-40 26 34.18	0.14	4	70.780				2291	
18574	-18	5262	7.9	G5	11 27.843	--	1	71.688	-17 59 19.91	--	1	71.688		26498		15369	
18575	-29	15872	7.12	A3	11 30.459	0.12	4	69.479	-29 19 48.43	0.09	4	69.479		26499		15370	
18576	-37	13112	8.6	A2	11 35.737	0.15	4	70.775	-37 28 18.80	0.08	4	70.775				15371	
18577	-31	16490	7.7	G5	19 11 38.246	0.12	4	69.605	-30 55 29.53	0.08	4	69.605				15372	
18578	-1	3683	7.5	K2	11 43.013	0.03	2	71.566	-1 13 40.10	0.30	2	71.566				15373	
18579	-13	5281	8.5	K0	11 51.691	0.10	2	72.012	-12 53 15.75	0.00	2	72.012				15374	
18580	-39	13186	8.0	G0	11 53.876	0.20	4	70.479	-39 45 04.21	0.18	4	70.479				15375	
18581	-63	4498	8.1	K0	11 53.977	0.06	4	71.061	-63 17 58.55	0.06	4	71.061				15376	
18582	-82	763	8.5	K5	19 11 56.993	0.12	4	70.253	-81 53 11.76	0.11	4	70.253				20086	
18582	SP				11 57.016	0.12	4	69.499	-81 53 11.85	0.33	4	69.499				20086	
18583	+2	3828	8.6	K5	12 00.704	0.18	3	71.147	+2 50 41.65	0.04	3	71.147				15377	
18584	-35	13333	8.4	K5	12 08.755	0.07	4	70.845	-35 14 48.18	0.08	4	70.845				15378	
18585	-65	3783	6.71	B9	12 09.258	0.10	6	69.023	-65 18 59.29	0.13	6	69.023	3538	26511		33538	
18586	+4	4031	8.7	K2	19 12 09.879	0.10	2	72.143	+4 10 06.49	0.44	2	72.143				15379	
18587	-39	13189	7.8	K0	12 12.043	0.15	4	70.514	-38 56 01.39	0.09	4	70.514				15380	
18588	+4	4034	8.0	A2	12 17.158	0.11	2	71.526	+4 31 56.25	0.19	2	71.526				15381	
18589	-29	15889	8.6	K0	12 21.780	0.17	4	70.500	-29 33 56.12	0.17	4	70.500				15382	
18590	-52	11403	7.9	K2	12 24.174	0.09	4	70.699	-52 08 51.88	0.14	4	70.699				15383	
18591	-34	13520	8.6	K0	19 12 28.166	0.19	3	70.249	-34 21 27.36	0.11	3	70.249				15384	
18592	-20	5464	7.63	A3	12 29.623	0.15	3	72.480	-19 52 30.54	0.12	2	72.010		26517		15385	
18593	-24	15161	6.22	F8	12 30.700	0.10	4	72.177	-24 16 01.25	0.20	3	71.763		26518		15386	
18594	-16	5220	8.0	K0	12 33.991	0.30	2	72.015	-16 11 14.25	0.23	2	72.015				15387	
18595	-4	4737	8.4	A5	12 34.019	0.07	2	72.000	-4 03 17.25	0.04	2	72.000				15388	
18596	+1	3944	9.0	K0	19 12 38.620	0.28	2	72.161	+1 27 49.84	0.00	2	72.161				15389	
18597	-6	5077	6.56	F0	12 41.722	0.16	2	71.014	-6 08 17.32	0.48	2	71.014		26524		15390	
18598	-49	12575	8.6	K0	12 42.677	0.24	4	70.462	-49 18 33.29	0.17	4	70.462				2292	
18599	-3	4535	7.6	K2	12 49.590	0.28	2	71.972	-3 12 08.90	0.25	2	71.972		26527		15391	
18600	-41	13420	8.74	K2	12 54.751	0.24	4	70.576	-41 38 40.73	0.08	4	70.576		26532		2293	
18601	-30	16828	7.18	A3	19 13 02.366	0.06	6	69.319	-30 32 54.89	0.06	6	69.319	3539	26538	4262	33539	
18602	-25	13875	7.36	K0	13 07.079	0.12	4	69.014	-25 45 20.31	0.11	4	69.014		26541		15392	
18603	-56	9136	8.3	K0	13 08.910	0.24	4	69.030	-56 06 08.13	0.08	4	69.030				15393	
18604	-32	15013	9.0	K2	13 10.257	0.07	4	70.027	-32 21 38.53	0.14	4	70.027				15394	
18605	-72	2352	7.9	F5	13 14.200	0.20	4	69.488	-72 44 25.29	0.13	4	69.488				20087	
18606	-83	680	9.0	G0	19 13 30.119	0.17	4	71.115	-83 44 02.26	0.19	4	71.115				20088	
18606	SP				13 30.193	0.12	4	70.037	-83 44 01.48	0.24	4	70.037				20088	
18607	-51	12014	7.89	K0	13 32.387	0.06	4	70.457	-51 35 12.43	0.12	4	70.457		26552		2294	
18608	-8	4912	7.4	K0	13 33.124	0.09	2	71.556	-8 46 46.16	0.30	2	71.556				15395	
18609	-65	3784	9.0	K0	13 36.700	0.13	4	70.599	-65 44 23.09	0.13	4	70.599				20089	
18610	-2	4916	8.7	F0	19 13 39.288	0.24	2	71.499	-2 45 19.11	0.09	2	71.499		26553		15396	
18611	-35	13356	8.6	G5	13 39.402	0.11	4	70.074	-35 16 25.99	0.14	4	70.074				15397	
18612	-11	4929	7.9	K2	13 40.650	0.01	2	71.525	-11 39 28.63	0.09	2	71.525				15398	
18613	-47	12823	8.5	K2	13 48.723	0.06	4	70.057	-47 24 41.26	0.08	4	70.057				2295	
18614	+2	3835	8.2	F0	13 53.825	0.19	2	71.985	+3 03 40.02	0.38	2	71.985				15399	
18615	-21	5325	8.5	K2	19 13 59.105	0.15	4	69.081	-21 35 10.40	0.12	4	69.081				15400	
18616	+21	3713	4.60	B5	14 03.978	0.10	7	69.824	+21 18 02.92	0.10	6	69.693	3540	26569	4266	33540	
18617	-55	9042	7.9	K0	14 13.039	0.06	4	69.939	-55 32 06.10	0.09	4	69.939				15401	
18618	-19	5372	8.9	A0	14 14.256	0.20	2	71.973	-19 04 34.58	0.09	2	71.973				15402	
18619	-74	1768	8.6	K2	14 18.207	0.17	4	69.970	-74 52 19.68	0.08	4	69.970				20090	
18620	-2	4924	8.3	K2	19 14 22.164	0.21	2	71.955	-2 02 14.61	0.09	2	71.955				15403	
18621	-45	13094	8.0	K5	14 22.585	0.07	4	69.917	-45 42 55.22	0.08	4	69.917				2296	
18622	-16	5249	7.70	K0	14 31.831	--	1	72.294	-16 09 50.41	--	1	72.294			4267	15404	
18623	-18	5290	8.6	K5	14 37.315	0.14	2	71.506	-17 54 45.27	0.10	2	71.506				15405	
18624	+0	4158	7.53	K2	14 37.782	0.18	2	70.037	+0 24 25.35	0.17	2	70.037		26584		15406	
18625	-14	5371	8.5	B9	19 14 37.963	0.06	2	72.119	-14 35 31.05	0.05	2	72.119				15407	
18626	+9	4048	9.4v	A	14 40.030	0.04	5	70.092	+9 15 13.29	0.19	4	70.000		26588		27591	
18627	-19	5379	5.03	K0	14 42.567	0.03	112	71.511	-19 02 37.25	0.03	109	71.466	722	26589	4269	30722	
18628	-52	11413	8.9	K2	14 46.928	0.17	4	69.576	-52 26 52.29	0.17	4	69.576				15408	
18629	-84	599	7.93	G5	14 55.370	0.16	4	70.434	-84 49 01.00	0.26	4	70.434		26594		20091	
18629	SP				19 14 54.892	0.16	4	69.519	-84 49 00.52	0.26	4	69.519		26594		20091	
18630	-25	13911	8.5	A3	14 58.771	0.18	4	69.485	-25 09 47.93	0.11	4	69.485				15409	
18631	-58	7603	8.3	G0	14 59.473	0.06	4	69.772	-58 48 48.34	0.07	4	69.772				15410	
18632	-39	13216	8.8	K5	15 03.978	0.06	4	70.442	-39 19 14.52	0.06	4	70.442				15411	
18633	-44	13244	8.74	G5	15 10.021	0.20	4	70.462	-44 23 19.02	0.10	4	70.462		26596		2297	
18634	+1	3960	6.12	A0	19 15 16.607	0.06	2	71.470	+1 56 26.41	0.20	2	71.470		26599		15412	
18635	-1	3702	8.6	K2	15 27.564	0.11	2	72.004	-1 06 01.38	0.13	2	72.004				15413	
18636	+11	3790	5.14	A5	15 28.106	0.10	3	70.282	+11 30 14.05	0.57	3	70.282		725	26609	4270	30725
18637	-46	12933	7.5	K2	15 29.268	0.10	4	70.089	-46 07 03.63	0.18	4	70.089				2299	
18638*	-51	12029	6.70	A0	15 43.981	0.21	6	69.919	-51 39 53.57	0.10	6	69.919	3542	26618	4273	33542	
18639	-28	15649	8.4	K2	19 15 44.579	0.09	4	69.057	-28 19 21.70	0.14	4	69.057				15414	
18640	-50	12429	8.5	K2	15 49.416	0.18	4	70.754	-50 26 07.26	0.27	4	70.754				2300	
18641	-41	13449	8.5	K0	15 53.095	0.08	4	7									

18626 9.4m to 12.8m.

18638 SDS, 6.8m-10.8m, 1°5, 338°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18644	-21	5340	8.5	K0	19 16 18.296	0.07	4	69.566	-20 59 04.38	0.09	4	69.566	1501	26631	4275	15417
18645	-35	13393	5.61	B5	16 21.322	0.03	74	71.327	-35 30 51.62	0.03	73	71.310				31501
18646	-48	13028	9.0	F0	16 33.945	0.10	3	70.211	-48 07 21.60	0.23	3	70.211				2298
18647	-42	14097	8.7	K5	16 34.492	0.09	4	70.614	-42 30 51.58	0.09	4	70.614				2302
18648	-70	2615	8.7	K2	16 37.029	0.10	4	70.659	-70 34 13.00	0.07	4	70.659				20092
18649	+1	3964	8.7	A5	19 16 38.657	0.02	2	71.518	+2 08 23.40	0.28	2	71.518				15418
18650	-7	4923	8.5	K0	16 39.631	0.19	2	71.523	-7 06 47.88	0.02	2	71.523				15419
18651	-14	5387	7.9	G5	16 43.146	0.04	2	71.040	-14 14 47.48	0.29	2	71.040				15420
18652	-30	16902	8.0	K2	16 43.678	0.17	4	70.562	-30 47 19.06	0.20	4	70.562				15421
18653	-36	13488	7.9	M0	16 53.441	0.09	5	71.036	-36 19 16.58	0.22	5	71.036				15422
18654	-34	13594	8.9	K5	19 17 02.521	0.16	4	71.057	-34 21 47.40	0.18	4	71.057				15423
18655	-0	3705	8.8	B9	17 08.497	0.02	2	71.552	-0 08 35.68	0.58	2	71.552				15424
18656	-56	9150	8.3	K0	17 11.758	0.14	4	69.494	-56 03 51.14	0.10	4	69.494				15425
18657	-49	12620	8.0	K2	17 12.135	0.14	5	71.541	-48 52 43.19	0.13	5	71.541				2303
18658	-37	13145	9.0	G5	17 12.644	0.12	4	71.310	-37 29 26.69	0.02	3	70.606				15426
18659	-71	2384	8.8	K2	19 17 21.688	0.14	4	70.576	-71 36 14.75	0.11	4	70.576				20093
18660	-38	13422	7.20	K2	17 22.939	0.08	4	70.759	-38 50 25.58	0.08	4	70.759	26657			15427
18661	-80	904	9.0	K0	17 24.017	0.12	4	69.586	-80 20 02.68	0.21	4	69.586				20094
18661	SP				17 23.996	0.09	4	69.701	-80 20 02.34	0.29	4	69.701				20094
18662	-28	15685	8.75	K5	17 29.587	0.12	4	69.974	-28 05 36.55	0.07	4	69.974	26658			15428
18663	-55	9060	7.7	G5	19 17 29.903	0.16	5	70.820	-55 28 21.02	0.19	4	70.169				15429
18664	-66	3425	8.2	K2	17 36.018	0.12	4	70.382	-66 15 44.99	0.17	4	70.382				20095
18665	+4	4069	8.1	K0	17 37.281	0.19	3	72.441	+4 23 11.41	0.18	3	72.441				15430
18666	-23	15298	8.4	K0	17 41.012	0.07	4	70.260	-23 08 58.79	0.25	4	70.260				15431
18667	+4	4071	6.92	A2	17 50.958	0.16	2	72.012	+4 41 04.10	0.20	2	72.012	26667			15432
18668	-31	16599	8.5	K2	19 17 51.009	0.18	3	69.464	-31 18 01.48	0.20	3	69.464				15433
18669	-33	14141	9.1	M0	17 51.458	0.08	3	70.690	-33 07 47.47	0.07	3	70.690				15434
18670	-5	4936	5.10	G5	17 52.881	0.11	6	69.009	-5 30 37.59	0.07	6	69.009	3544	26669	4282	33544
18671	+0	4177	9.0	F0	17 53.489	--	1	71.726	+1 07 51.86	--	1	71.726				15435
18672	-8	4939	8.3	K2	17 58.135	0.06	2	70.502	-8 18 54.42	0.23	2	70.502				15436
18673	-2	4946	7.3	K0	19 18 00.626	0.17	2	72.027	-2 34 11.88	0.15	2	72.027				15437
18674	-4	4781	7.40	K5	18 09.531	0.19	2	71.480	-4 35 49.53	0.29	2	71.480	26676			15438
18675	-18	5315	8.1	G5	18 13.962	0.12	2	72.532	-18 36 46.43	0.25	2	72.532				15439
18676	-62	6074	8.8	K5	18 23.749	0.08	4	70.689	-61 55 11.23	0.16	3	69.777				15440
18677	-1	3720	7.06	K2	18 31.689	0.04	2	72.033	-1 16 17.66	0.06	2	72.033	26685			15441
18678	-12	5361	8.8	A3	19 18 31.706	--	1	71.737	-12 21 42.18	--	1	71.737				15442
18679	-10	5041	8.3	K5	18 37.073	0.16	2	72.181	-10 16 16.71	0.00	2	72.181				15443
18680	-26	14096	7.40	K2	18 39.531	0.09	3	69.548	-26 15 41.55	0.04	3	69.548	26688	4285		15444
18681	-72	2367	8.3	K2	18 41.448	0.03	4	71.214	-71 54 46.81	0.13	4	71.214				20096
18682	-5	4941	8.7	K5	18 43.943	--	1	71.748	-5 41 35.63	--	1	71.748				15445
18683	-54	9337	8.5	K0	19 18 45.128	0.23	4	70.404	-54 42 40.99	0.17	4	70.404				15446
18684	-51	12055	8.5	K0	18 47.615	0.26	4	70.517	-50 53 59.14	0.23	4	70.517				2304
18685	-17	5598	8.0	F8	18 48.493	0.03	2	70.641	-17 20 26.37	0.22	2	70.641				15447
18686	-16	5283	4.58	*	18 51.837	0.02	106	71.003	-16 03 01.93	0.03	104	70.964	727	26697	4287	80727
18687	-15	5325	8.9	F8	18 52.010	0.12	2	72.601	-15 39 50.61	0.05	2	72.601				15448
18688	-69	2988	7.6	K0	19 18 59.672	0.21	5	71.030	-69 14 23.42	0.06	5	71.030				20097
18689	-2	4950	8.8	K5	19 00.183	--	1	72.462	-2 34 43.54	--	1	72.462				15449
18690	-44	13277	4.31	B8	19 02.834	0.05	33	70.785	-44 33 17.98	0.07	32	70.795	1502	26703	4289	31502
18691	-53	9537	8.9	F8	19 04.848	0.18	4	70.955	-53 45 04.42	0.17	4	70.955				15450
18692	-5	4942	8.2	A0	19 07.199	0.27	2	72.408	-5 44 35.47	0.11	2	72.408				15451
18693	-22	5073	8.4	K0	19 19 16.265	0.21	3	70.940	-22 10 11.15	0.25	3	70.940				15452
18694	-74	1781	8.0	K2	19 18.900	0.16	3	68.820	-74 46 14.80	0.11	3	68.820				20098
18695	-16	5287	8.5	K2	19 24.315	0.02	2	71.992	-16 41 09.47	0.17	2	71.992				15453
18696	-76	1331	8.6	A2	19 29.645	0.12	4	70.374	-76 27 56.48	0.06	4	70.374				20099
18696	SP				19 29.632	0.25	4	69.997	-76 27 56.50	0.26	4	69.997				20099
18697	-43	13336	7.8	K5	19 19 33.405	0.20	4	70.478	-43 18 26.45	0.12	4	70.478				2305
18698	-60	7288	8.8	K5	19 33.771	0.05	4	70.788	-60 04 12.13	0.19	4	70.788				15454
18699	-32	15117	8.0	M1	19 34.052	0.10	4	70.032	-32 35 59.01	0.06	4	70.032				15455
18700	-20	5514	8.6	G5	19 35.357	0.13	2	70.012	-20 24 46.18	0.17	2	70.012				15456
18701	-59	7478	8.7	K0	19 42.413	0.18	4	70.561	-59 35 25.37	0.20	4	70.561				15457
18702	-35	13447	8.4	K0	19 19 45.208	0.09	4	70.747	-35 14 39.72	0.06	4	70.747				15458
18703	-63	4518	8.3	M1	19 46.786	0.27	4	70.256	-63 27 32.46	0.31	4	70.256				15459
18704	-0	3725	5.95	K0	19 47.300	0.08	6	69.393	-0 20 54.92	0.17	6	69.393	3546	26723		33546
18705	-3	4572	8.7	B9	19 47.739	0.37	2	72.019	-3 43 49.08	0.50	2	72.019				15461
18706	+0	4186	7.78	F8	19 47.787	0.02	2	72.147	+0 17 10.51	0.56	2	72.147		26724		15460
18707	-29	16059	7.3	K5	19 47.878	0.10	4	70.728	-29 09 40.71	0.25	4	70.728				15462
18708	+3	3990	8.6	F8	19 54.368	0.09	2	72.026	+3 14 31.19	0.17	2	72.026				15463
18709	-40	13241	9.2	K0	19 58.334	0.23	4	70.833	-40 24 49.03	0.11	4	70.833				2306
18710	-78	1231	8.7	G0	20 00.569	0.27	4	71.128	-78 19 14.79	0.12	4	71.128				20100
18710	SP				20 00.593	0.27	4	69.979	-78 19 15.03	0.16	4	69.979				20100
18711	-24	15285	8.5	K2	19 20 21.955	0.10	4	69.055	-24 18 56.02	0.17	4	69.055				15464
18712	-7	4942	6.39	K0	20 22.457	0.53	2	69.991	-7 29 51.48	0.11	2	69.991		26731		15465
18713	+9	4081	6.25	F8	20 25.449	0.18	6	70.541	+9 48 54.88	0.10	6	70.541	3548	26736		33548
18714	-40	13245	4.11	B8	20 25.545	0.05	33	71.488	-40 42 45.71	0.05	32	71.454	728	26737	4293	30728
18715	-36	13518	8.1	K0	20 43.001	0.23	4	70.568	-36 02 17.71	0.15	4	70.568				15466

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
18716	-13	5336	8.1	G5	19 20 43.924	0.53	2	71.488	-13 21 32.91	0.08	2	71.488				15467
18717	-33	14186	7.74	A5	20 46.280	0.16	4	70.513	-33 38 24.56	0.28	4	70.513		26745		15468
18718	-52	11434	8.0	K0	20 49.709	0.17	4	70.058	-51 53 20.27	0.22	4	70.058				2307
18719	-68	3227	8.4	K2	20 50.924	0.32	4	71.027	-68 05 55.66	0.13	4	71.027				20101
18720	-46	12983	8.8	K0	20 51.701	0.05	4	70.475	-46 29 46.41	0.20	4	70.475				2308
18721	-48	13067	8.0	K0	19 21 04.835	0.05	4	69.985	-48 11 26.48	0.10	4	69.985				2309
18722	-57	9391	8.4	K0	21 05.900	0.10	5	70.633	-57 28 29.41	0.02	5	70.633				15469
18723	-28	15763	8.5	K0	21 07.725	0.11	4	69.532	-27 56 34.88	0.04	4	69.532				15470
18724	-44	13303	6.93	K0	21 21.481	0.16	4	70.505	-44 17 36.76	0.08	4	70.505		26763		2310
18725	-65	3795	8.8	K0	21 22.172	0.08	4	69.486	-65 49 22.15	0.12	4	69.486				20102
18726	-28	15767	5.94	B3	19 21 23.262	0.10	6	70.621	-27 57 51.88	0.12	6	70.621		26766		21159
18727	-27	13917	9.0	A0	21 26.984	0.19	4	70.622	-27 06 40.73	0.15	4	70.622				15471
18728	-47	12886	7.5	F2	21 28.121	0.07	4	70.476	-47 33 20.58	0.21	4	70.476				2311
18729	-19	5436	7.90	G5	21 34.313	0.30	2	71.518	-19 01 35.55	0.15	2	71.518		26768		15472
18730	-9	5123	7.21	K5	21 39.185	0.18	2	71.072	-9 26 12.37	0.20	2	71.072		26772		15473
18731	-37	13169	8.7	K0	19 21 40.181	0.15	5	71.013	-37 38 48.17	0.18	5	71.013				15474
18732	-45	13196	8.0	K2	21 47.150	0.08	4	70.085	-45 06 40.28	0.11	4	70.085				2312
18733	-12	5388	7.4	G5	21 53.652	0.19	2	71.540	-12 42 52.35	0.12	2	71.540				15475
18734	-5	4961	7.6	A2	22 04.728	0.19	2	70.148	-5 31 01.81	0.18	2	70.148				15476
18735	-62	6085	8.7	K0	22 05.211	0.03	4	69.591	-62 25 56.06	0.14	4	69.591				15477
18736	+29	3584	4.86	B3	19 22 09.203	0.08	7	70.058	+29 31 20.58	0.12	6	69.991	3550	26785	4297	33550
18737	-73	2016	7.52	A3	22 11.717	0.16	6	71.169	-73 11 27.92	0.10	6	71.169	3551	26787		33551
18737	SP				22 11.728	0.10	19	71.656	-73 11 28.79	0.21	17	71.785	3551	26787		53551
18738	+1	3986	8.4	B5	22 21.661	0.04	2	71.925	+1 44 07.53	0.16	2	71.925		26795		15478
18739	-30	17008	8.6	G5	22 21.805	0.15	4	69.522	-30 23 42.99	0.11	4	69.522				15479
18740	-80	908	9.2	F8	19 22 22.336	0.25	4	70.009	-80 05 18.83	0.10	4	70.009				20103
18740	SP				22 22.257	0.25	4	69.975	-80 05 18.29	0.26	4	69.975				20103
18741	-17	5621	8.4	K2	22 26.294	0.03	2	72.000	-16 56 09.24	0.14	2	72.000				15480
18742	-17	5620	8.9	G5	22 27.482	--	1	72.640	-17 44 33.49	--	1	72.640				15481
18743	+1	3987	8.7	K0	22 28.108	0.00	2	71.969	+1 43 59.26	0.08	2	71.969				15482
18744	-39	13265	8.6	G5	19 22 28.836	0.12	4	70.721	-39 43 00.29	0.09	4	70.721				15483
18745	-14	5428	5.81	K0	22 32.189	0.07	6	69.093	-13 59 50.33	0.10	6	69.093	3552	26805	4298	33552
18746	-11	4986	8.5	G0	22 32.266	0.10	2	72.202	-11 36 45.86	0.36	2	72.202				15484
18747	-14	5427	8.1	K0	22 33.325	0.41	2	72.165	-14 37 32.47	0.11	2	72.165		26808		15485
18748	-1	3738	8.8	K5	22 34.809	0.07	2	72.147	-0 57 41.43	0.19	2	72.147				15486
18749	+11	3833	5.23	G5	19 22 36.120	0.05	15	70.867	+11 50 22.80	0.06	15	70.867	1503	26809	4300	31503
18750	-32	15163	9.2	K2	22 41.223	0.19	4	70.094	-32 45 34.40	0.09	4	70.094				15487
18751	-22	5100	7.06	K0	22 43.664	0.10	4	69.739	-22 33 04.62	0.10	4	69.739		26812		15488
18752	-7	4953	8.6	K5	22 47.628	0.01	2	71.488	-7 01 41.88	0.26	2	71.488				15489
18753	-4	4805	8.1	G5	22 48.758	0.25	2	70.517	-3 50 03.52	0.42	2	70.517		26814		15490
18754	-0	3737	8.5	K5	19 22 58.022	0.19	2	72.215	-0 02 18.33	0.27	2	72.215				15491
18755	+2	3879	3.44	F0	22 58.981	0.05	25	71.947	+3 00 50.68	0.05	24	71.886	730	26816	4301	30730
18756	-2	4986	7.69	A0	23 01.998	0.10	2	72.161	-2 09 40.78	0.08	2	72.161		26818		15492
18757	-56	9182	8.3	K2	23 03.764	0.14	4	69.617	-56 35 59.90	0.11	4	69.617				15493
18758	-11	4990	8.6	K5	23 03.943	--	1	71.688	-11 19 04.03	--	1	71.688				15494
18759	-60	7294	8.16	A2	19 23 17.828	0.19	4	70.717	-60 00 33.00	0.17	4	70.717				15495
18760	-22	5105	5.56	K0	23 20.335	0.09	6	70.245	-21 52 38.47	0.19	6	70.245	3553	26822	4302	33553
18761	-15	5348	5.68	B8	23 20.404	--	1	70.721	-15 09 13.91	--	1	70.721		26824		15496
18762	-51	12095	9.0	K0	23 24.239	0.15	4	70.318	-51 33 47.18	0.21	4	70.318				2313
18763	-34	13678	8.9	K0	23 33.092	0.08	4	70.448	-34 12 50.98	0.18	4	70.448				15497
18764	-48	13087	8.0	K0	19 23 33.412	0.09	4	70.519	-48 36 45.82	0.16	4	70.519				2314
18765	+3	4016	8.3	A2	23 35.088	0.13	2	72.196	+3 25 07.20	0.10	2	72.196				15498
18766	-26	14192	7.5	A2	23 37.521	0.12	4	69.533	-26 25 09.87	0.17	4	69.533				15499
18767	-45	13213	9.1	K0	23 37.907	0.18	4	70.693	-45 19 17.29	0.06	4	70.693				2315
18768	-25	14052	8.5	F8	23 40.874	0.09	4	70.018	-25 41 04.83	0.05	4	70.018				15500
18769	-29	16140	5.68	B9	19 23 47.004	0.06	20	70.590	-29 50 38.92	0.07	20	70.590	731	26833	4306	30731
18770	-54	9371	5.58	K2	23 47.540	0.03	69	71.146	-54 25 37.86	0.04	68	71.112	1504	26834	4307	31504
18771	-41	13518	9.5	K0	23 54.397	0.11	4	71.101	-41 02 16.45	0.09	4	71.101				2316
18772	-36	13539	9.0	K5	23 55.451	0.10	4	70.775	-36 12 07.89	0.09	4	70.775				15501
18773	-31	16703	9.0	K2	23 58.831	0.10	4	70.629	-31 27 01.52	0.16	3	69.700				15502
18774	-55	9087	8.8	K0	19 23 58.833	0.13	5	71.636	-55 11 01.42	0.14	5	71.636				15503
18775	-68	3246	9.2	K5	24 07.135	0.09	4	70.873	-68 39 27.45	0.24	4	70.873				20104
18776	-10	5078	8.6	F5	24 11.302	0.10	3	72.452	-10 21 07.14	0.32	3	72.452				15504
18777	+19	4017	6.04	K5	24 17.403	0.17	2	70.079	+19 47 25.76	0.77	2	70.079	1505	26844	4308	31505
18778	-23	15422	8.0	G5	24 17.796	0.10	4	70.300	-23 26 55.51	0.12	4	70.300				15505
18779	-1	3744	8.1	G5	19 24 23.044	0.16	2	72.195	-1 00 45.42	0.58	2	72.195				15506
18780	-42	14214	8.0	K0	24 23.338	0.16	4	70.918	-42 39 45.38	0.10	4	70.918				2317
18781	-38	13486	8.9	K0	24 34.143	0.08	4	71.035	-38 24 54.28	0.17	4	71.035				15507
18782	-20	5559	8.7	A3	24 37.886	0.15	4	70.273	-20 27 55.83	0.06	4	70.273				15508
18783	-67	3646	7.70	K0	24 42.900	0.12	4	70.764	-67 24 41.74	0.15	4	70.764		26856		20105
18784	-65	3802	9.1	K0	19 24 46.061	0.03	4	71.357	-64 59 16.15	0.15	3	70.670				20106
18785	-46	13023	8.0	G5	24 47.092	0.04	4	70.977	-46 34 39.75	0.04	4	70.977				2318
18786	-43	13389	9.0	A2	24 52.781	0.19	4	70.821	-43 34 17.42	0.07	4	70.821				2319
18787	-8	4987	8.2	K5	24 57.544	0.10	2	72.490	-8 28 24.43	0.09	2	72.490				15509
18788	-40	13298	8.4	G5	25 01.844	0.26	4	70.900	-40 24 10.73	0.09	4	70.900				2320

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18789	-35	13506	8.57	G0	19 25 02.872	0.08	4	70.438	-35 14 06.72	0.12	4	70.438		26867		15510
18790	-19	5462	8.4	G5	25 07.640	--	1	71.726	-19 26 43.87	--	1	71.726				15511
18791*	+ 8	4105	8.6	K2	25 09.126	0.06	4	69.573	+ 9 04 20.47	0.15	4	69.573				27629
18792	+ 4	4114	6.65	F0	25 12.347	0.06	2	72.027	+ 4 36 25.69	0.01	2	72.027		26871		15512
18793	- 5	4979	7.55	K2	25 13.060	0.43	2	71.944	- 4 55 13.35	0.28	2	71.944		26872	4313	15513
18794	-29	16173	8.0	G5	19 25 13.270	0.10	4	69.976	-29 29 23.80	0.11	4	69.976				15514
18795	+13	4020	6.26	B5	25 15.870	0.09	6	70.707	+14 10 48.01	0.16	6	70.707	3555	26875	4314	33555
18796	-82	770	6.66	K0	25 17.093	0.02	205	71.099	-81 51 35.15	0.03	201	71.057	3993	26876	4315	63993
18796	SP				25 17.092	0.02	264	71.241	-81 51 35.20	0.03	252	71.231	3993	26876	4315	73993
18797	-70	2646	7.9	K5	25 17.382	0.15	4	70.417	-70 09 04.58	0.20	4	70.417				20107
18798	+ 3	4028	8.7	A0	19 25 18.163	--	1	71.748	+ 3 39 47.29	--	1	71.748				15515
18799	- 9	5141	8.2	K0	25 18.851	--	1	71.737	- 9 31 41.73	--	1	71.737				15516
18800	+ 1	4004	7.4	K2	25 20.326	0.07	2	72.243	+ 2 04 17.80	0.33	2	72.243				15517
18801	-36	13554	8.9	G5	25 35.504	0.06	4	70.542	-35 59 29.07	0.09	4	70.542				15518
18802	-75	1508	9.0	F8	25 39.129	0.19	4	71.177	-75 05 12.67	0.19	4	71.177				20108
18802	SP				19 25 39.076	0.21	4	70.652	-75 05 12.80	0.27	4	70.652				20108
18803	-52	11455	9.0	G5	25 42.824	0.17	4	70.286	-52 43 39.13	0.21	4	70.286				15519
18804	-47	12929	9.3	K0	25 43.062	0.10	4	70.696	-47 41 03.92	0.08	4	70.696				2321
18805	-58	7617	8.4	K0	25 44.404	0.05	4	69.988	-58 02 34.58	0.16	4	69.988				15520
18806	-15	5362	6.73	B3	25 44.754	0.16	6	70.826	-15 12 20.25	0.12	6	70.826		26882		21160
18807	-50	12516	8.5	K5	19 25 48.509	0.12	4	70.501	-50 15 19.92	0.15	4	70.501				2322
18808	-39	13293	8.9	K0	25 50.988	0.17	4	70.515	-39 34 18.67	0.12	4	70.515				15521
18809	-10	5089	7.7	K5	25 53.275	0.19	2	70.536	-10 27 01.31	0.02	2	70.536				15522
18810	+ 0	4215	8.6	K2	25 54.969	0.19	2	72.428	+ 0 18 03.26	0.29	2	72.428				15523
18811	- 4	4815	9.0	G5	25 55.710	0.14	4	71.568	- 3 50 28.77	0.22	4	71.568				27633
18812	-16	5325	8.8	K5	19 25 58.412	0.22	2	71.973	-16 37 15.48	0.31	2	71.973				15524
18813	-68	3251	5.95	K5	26 00.043	0.06	7	70.481	-68 32 19.69	0.20	6	70.484	3557	26891	4318	33557
18814	-49	12686	9.0	F8	26 02.618	0.15	4	70.543	-49 26 38.52	0.08	4	70.543				2323
18815	+15	3827	8.7	F8	26 06.799	0.12	2	70.544	+16 11 05.16	0.28	2	70.544				27637
18816	+18	4092	9.0	F5	26 08.499	0.11	4	71.117	+18 22 52.67	0.33	4	71.117				27638
18817	-25	14081	8.4	K0	19 26 12.031	0.15	4	70.460	-25 34 17.56	0.08	4	70.460				15525
18818	-32	15216	8.1	F8	26 12.448	0.15	4	70.518	-32 37 02.27	0.09	4	70.518				15526
18819	-66	3437	7.6	K2	26 30.169	0.25	4	69.980	-66 39 31.32	0.16	4	69.980				20109
18820	-37	13212	9.0	G0	26 30.572	0.06	4	70.999	-37 08 32.52	0.09	4	70.999				15527
18821	-36	13562	8.1	K2	26 30.654	0.19	4	70.710	-36 24 00.16	0.17	4	70.710				15528
18822	-34	13711	9.1	M0	19 26 34.441	0.08	4	70.763	-34 43 56.36	0.06	4	70.763				15529
18823	+24	3759	4.63	M0	26 37.207	0.05	48	71.367	+24 33 42.61	0.07	46	71.323	1508	26904	4321	81508
18824	- 4	4816	8.3	F2	26 41.877	0.07	2	72.018	- 4 28 54.29	0.05	2	72.018				15530
18825	-15	5366	7.04	A0	26 42.939	0.17	2	72.154	-15 27 47.26	0.12	2	72.154		26906		15531
18826	- 1	3753	7.9	K2	26 43.705	0.13	2	72.131	- 1 29 09.25	0.32	2	72.131			4322	15532
18827	- 0	3760	6.52	K2	19 26 44.419	0.12	2	71.952	+ 0 08 30.57	0.42	2	71.952	26907	4323		15533
18828	-73	2027	7.54	K0	26 45.315	0.11	5	70.670	-73 36 09.39	0.28	5	70.670	26910			20110
18829	-21	5405	8.05	K0	26 45.340	0.15	4	70.759	-21 26 35.22	0.06	4	70.759	26909			15534
18830	- 3	4603	8.8	K2	26 47.106	0.12	2	72.522	- 2 54 42.99	0.20	2	72.522				15535
18831	-27	14006	8.25	K2	26 55.765	0.05	4	71.019	-27 27 08.27	0.20	4	71.019	26915			15536
18832	+ 2	3899	7.97	B5	19 26 59.585	--	1	71.644	+ 2 59 06.70	--	1	71.644	26917			15537
18833	-11	5015	8.5	K0	27 02.928	--	1	71.696	-11 08 06.16	--	1	71.696				15538
18834	-18	5389	8.2	A3	27 14.326	--	1	73.338	-18 20 52.92	--	1	73.338				15539
18835	-12	5420	8.5	K0	27 14.357	--	1	71.718	-12 41 07.35	--	1	71.718				15540
18836	-38	13521	8.6	G5	27 26.586	0.12	4	71.090	-38 13 38.91	0.23	4	71.090				15541
18837	-54	9387	9.0	G5	19 27 28.133	0.24	4	70.991	-54 41 27.64	0.16	3	70.181				15542
18838	-34	13728	9.0	K5	27 28.407	0.12	4	70.885	-33 51 37.48	0.14	4	70.885				15543
18839	-44	13369	8.8	F0	27 30.791	0.07	4	70.870	-44 43 48.36	0.16	4	70.870				2324
18840	-24	15379	8.6	K0	27 35.211	0.10	4	70.788	-24 41 14.96	0.13	4	70.788				15544
18841	- 6	5166	8.5	K5	27 37.957	--	1	71.701	- 6 38 19.63	--	1	71.701				15545
18842	- 3	4611	8.4	F8	19 27 40.178	--	1	71.710	- 3 17 15.67	--	1	71.710		26926		15546
18843	-53	9579	8.3	K2	27 54.716	0.12	4	69.895	-53 28 00.12	0.19	4	69.895				15547
18844	- 8	5008	7.6	B9	27 59.209	0.42	2	72.540	- 8 17 31.84	0.58	2	72.540				15548
18845	-31	16772	9.0	K0	28 02.117	0.09	3	70.622	-31 50 45.72	0.07	3	70.622				15549
18846	- 3	4612	5.22	M0	28 02.940	0.06	15	71.257	- 2 53 40.72	0.09	15	71.257	1509	26936	4324	31509
18847	-43	13418	9.0	G5	19 28 05.370	0.04	4	71.028	-43 11 40.24	0.09	4	71.028				2325
18848	-14	5450	8.2	K0	28 08.339	--	1	71.748	-14 40 09.18	--	1	71.748				15550
18849	-13	5385	8.2	G5	28 08.619	--	1	72.462	-13 29 15.21	--	1	72.462				15551
18850	-49	12706	9.0	G5	28 21.355	0.09	4	70.535	-49 08 43.50	0.11	4	70.535				2328
18851	- 2	5022	7.7	K5	28 23.912	0.16	2	70.014	- 2 08 27.22	0.16	2	70.014				15552
18852	+ 1	4021	6.81	K0	19 28 33.545	--	1	71.759	+ 1 54 20.05	--	1	71.759		26950		15554
18853	-57	9421	8.3	K2	28 41.889	0.08	4	69.435	-57 43 48.06	0.13	4	69.435				15555
18854	+27	3410	3.24	*	28 42.229	0.35	9	71.102	+27 51 12.47	0.21	9	71.102	732	26953	4327	30732
18855	-45	13284	8.0	G5	28 45.596	0.16	4	70.531	-45 28 30.58	0.10	4	70.531				2326
18856	-42	14276	9.5	G5	28 51.955	0.11	4	71.131	-42 13 54.44	0.15	4	71.131				2327
18857	-23	15506	8.6	K0	19 28 57.686	0.10	3	69.914	-23 40 58.77	0.19	3	69.914				15556
18858	-30	17123	8.8	G0	29 00.457	0.17	4	71.015	-30 51 18.12	0.17	4	71.015				15557
18859	-28	15920	8.0	K2	29 06.886	0.17	4	71.309	-28 28 56.53	0.13	4	71.309				15558
18860	-20	5590	8.6	G5	29 10.020	0.16	4	70.768	-20 30 27.36	0.13	4	70.768				15559
18861	-35	13554	8.5	K2	29 13.191	0.16	4	70.776	-35 33 37.90	0.07	4	70.776				15560

18791 A 12465AB, 8.6m-9.4m, 0.7, 295°.

18854 K0+A0.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
18862	-11	5030	7.34	G5	19 29 20.113	0.07	2	71.973	-11 22 56.98	0.01	2	71.973		26969		15561
18863	+4	4139	8.8	K0	29 22.275	--	1	70.742	+4 14 28.00	--	1	70.742				15562
18864	-72	2394	8.9	K5	29 22.963	0.15	5	71.158	-71 51 49.83	0.09	5	71.158				20111
18865	-56	9209	8.1	G5	29 43.970	0.10	4	69.461	-56 17 46.64	0.10	4	69.461				15563
18866	-45	13296	5.87	A0p	29 45.605	0.09	6	69.400	-45 22 47.30	0.07	6	69.400	3558	26981	4329	33558
18867	-81	856	9.8	G0	19 29 58.588	0.50	4	70.676	-81 24 51.11	0.27	4	70.676				20112
18867	SP				29 58.433	0.42	4	71.592	-81 24 50.47	0.49	4	71.592				20112
18868	-62	6089	7.9	K0	30 01.217	0.13	4	71.017	-62 29 29.77	0.11	4	71.017				15564
18869	-37	13236	8.9	F5	30 02.490	0.26	4	70.550	-37 44 15.38	0.12	4	70.550				15565
18870	-33	14304	9.0	K0	30 09.295	0.03	4	70.497	-32 53 42.78	0.28	4	70.497				15566
18871	+1	4026	8.6	K2	19 30 10.642	0.21	2	72.483	+2 00 41.45	0.02	2	72.483				15567
18872	-8	5023	8.7	K5	30 14.588	0.04	2	71.579	-8 06 18.40	0.19	2	71.579				15568
18873	-50	12554	7.84	K2	30 24.848	0.08	4	70.273	-50 40 26.75	0.18	4	70.273		26998		2329
18874	-34	13760	6.94	A0	30 26.525	0.06	6	69.716	-34 18 22.90	0.10	6	69.716	3559	26999		33559
18875	-52	11475	7.9	K2	30 34.877	0.09	4	69.976	-52 22 45.03	0.10	4	69.976				15569
18876	-40	13355	7.9	K0	19 30 36.725	0.15	4	70.061	-39 53 43.11	0.05	4	70.061				15570
18877	-1	3769	8.5	B9	30 38.045	0.15	2	71.488	-0 56 30.11	0.37	2	71.488				15571
18878	-40	13356	5.90	A2	30 42.960	0.16	6	70.034	-40 08 38.36	0.10	6	70.034	3560	27006		33560
18879	-16	5356	8.4	K0	30 59.195	--	1	70.745	-15 56 01.02	--	1	70.745				15572
18880	-3	4627	8.5	F2	30 59.510	0.20	2	71.993	-3 44 08.20	0.16	2	71.993				15573
18881	-0	3774	8.4	A5	19 31 01.060	0.25	2	72.157	-0 23 33.24	0.19	2	72.157				15574
18882	-5	5006	7.6	K2	31 04.507	0.01	2	71.993	-4 51 03.81	0.10	2	71.993				15575
18883	-22	5154	8.6	K2	31 08.596	0.08	4	70.347	-22 12 50.16	0.12	4	70.347				15576
18884	-74	1816	8.3	K2	31 08.934	0.13	4	70.729	-74 20 22.55	0.16	4	70.729				20113
18885	-19	5505	8.4	K0	31 13.728	0.23	3	71.202	-19 40 49.07	0.09	3	71.202				15577
18886	-17	5672	8.6	K0	19 31 16.052	--	1	71.614	-17 25 40.74	--	1	71.614				15578
18887	-24	15415	8.8	A2	31 18.742	0.17	4	69.554	-24 44 20.47	0.33	4	69.554				15579
18888	-27	14080	8.4	K0	31 19.573	0.14	4	69.605	-27 15 43.64	0.19	4	69.605				15580
18889	-75	1527	8.6	K2	31 22.433	0.15	4	70.472	-75 31 06.00	0.19	4	70.472				20114
18889	SP				31 22.189	0.22	4	70.060	-75 31 06.05	0.20	4	70.060				20114
18890	-48	13161	5.02	K0	19 31 30.706	0.03	81	71.244	-48 12 33.37	0.03	79	71.200	735	27025	4332	30735
18891	-24	15421	6.67	K5	31 32.940	0.13	4	69.537	-23 58 07.63	0.12	4	69.537		27026		15581
18892	-70	2667	9.1	G5	31 33.298	0.35	3	69.853	-69 55 39.80	0.13	3	69.853				20115
18893	-53	9600	8.2	K2	31 34.858	0.18	4	70.511	-53 13 47.40	0.19	4	70.511				15582
18894	-13	5399	7.5	G0	31 38.420	0.54	2	72.196	-13 02 09.30	0.12	2	72.196			4333	15583
18895	+7	4132	4.65	K0	19 31 39.060	0.05	44	71.395	+7 16 13.62	0.04	43	71.417	1511	27030	4334	31511
18896	-38	13562	8.9	K0	31 41.910	0.18	4	70.068	-38 34 22.29	0.15	4	70.068				15584
18897	-67	3656	9.1	K0	31 53.635	0.10	4	71.767	-67 18 22.55	0.54	3	71.216				20116
18898	+1	4035	8.7	A0	31 58.309	0.07	2	72.160	+1 22 18.81	0.14	2	72.160				15585
18899	-40	13372	8.4	G5	32 00.310	0.04	4	70.487	-39 58 07.19	0.12	4	70.487				2331
18900	-41	13588	8.0	K0	19 32 04.453	0.02	5	70.968	-41 13 54.87	0.10	5	70.968				2330
18901	-61	6385	8.8	K5	32 06.311	0.20	5	71.217	-61 03 04.91	0.12	5	71.217				15586
18902	-10	5122	5.24	G5	32 21.957	0.05	6	70.390	-10 40 16.13	0.05	6	70.390	3562	27046		33562
18903	-76	1351	8.9	A0	32 24.699	0.07	5	71.322	-76 11 51.31	0.25	4	70.797				20117
18903	SP				32 24.700	0.19	4	69.751	-76 11 51.19	0.20	4	69.751				20117
18904	-33	14327	8.8	G5	19 32 24.802	0.12	4	71.282	-33 13 07.01	0.07	4	71.282				15587
18905	-2	5048	8.5	K0	32 29.099	--	1	72.400	-2 18 24.72	--	1	72.400				15589
18906	-34	13794	8.4	K0	32 30.853	0.20	4	71.080	-34 37 17.01	0.16	4	71.080				15590
18907	+4	4159	7.6	F2	32 32.631	--	1	71.759	+4 12 02.19	--	1	71.759			27052	15591
18908	-21	5444	6.73	G0	32 38.485	0.08	4	71.758	-20 53 30.93	0.16	3	71.205		27054		15592
18909*	-36	13620	9.0	G0	19 32 43.152	0.18	3	70.587	-36 14 08.94	0.03	3	70.587				15593
18910	-7	5000	8.2	G5	32 53.854	--	1	72.462	-7 25 38.92	--	1	72.462				15594
18911	-51	12168	9.0	G0	32 58.489	0.12	4	70.752	-51 11 41.26	0.19	4	70.752				2332
18912	-24	15442	5.68	A3p	32 59.604	0.14	4	70.492	-24 49 49.49	0.16	4	70.492		27067		15595
18913	-47	12992	8.5	G5	32 59.862	0.18	4	71.021	-46 59 40.72	0.23	4	71.021				2333
18914	-26	14337	7.9	F2	19 33 00.163	0.11	3	69.642	-26 00 45.22	0.28	3	69.642				15596
18915	-50	12576	8.3	K2	33 00.431	0.08	4	71.084	-49 54 49.94	0.13	4	71.084				2334
18916	-55	9132	7.8	K2	33 04.601	0.18	4	71.249	-54 51 12.66	0.12	4	71.249				15598
18917	-54	9418	8.03	G5	33 12.042	0.09	4	70.342	-54 15 56.51	0.22	4	70.342		27077		15599
18918	-19	5517	8.7	G5	33 17.357	0.01	2	72.573	-19 00 55.60	0.13	2	72.573				15600
18919	-28	15995	7.5	K2	19 33 18.270	0.16	2	72.039	-28 47 11.19	0.11	2	72.039				15601
18920	-31	16870	9.1	G5	33 27.224	0.13	3	69.647	-31 43 24.30	0.18	3	69.647				15602
18921	-46	13097	8.5	G5	33 31.386	0.05	4	70.131	-46 26 42.77	0.16	4	70.131				2335
18922	-64	3997	9.0	G0	33 31.474	0.13	4	70.376	-64 14 46.34	0.11	4	70.376				20118
18923	-64	3998	7.65	K2	33 31.840	0.17	4	69.984	-64 01 43.05	0.13	4	69.984		27086		15603
18924	-9	5184	8.3	K5	19 33 39.121	--	1	71.680	-9 25 55.75	--	1	71.680				15604
18925p	-25	14184	4.66	B9	33 40.066	0.02	81	70.984	-24 59 44.91	0.03	82	70.981	736	27089	4337	80736
18926	-44	13441	8.41	K5	33 44.973	0.07	4	70.485	-44 23 49.09	0.12	4	70.485		27090		2336
18927	-17	5685	8.8	B9	33 48.796	--	1	71.699	-17 26 48.36	--	1	71.699				15606
18928	-60	7303	8.1	K2	33 49.564	0.17	4	70.261	-60 31 33.10	0.29	4	70.261				15607
18929	-57	9438	8.4	K0	19 33 50.381	0.08	4	70.440	-57 11 56.26	0.21	4	70.440				15608
18930	-11	5054	8.7	K0	33 50.690	--	1	71.737	-11 21 09.48	--	1	71.737				15609
18931	-22	5167	8.0	G0	33 56.420	0.13	4	69.454	-22 00 54.98	0.13	4	69.454				15610
18932	+22	3741	6.12	B9	33 59.932	0.16	6	69.155	+22 28 24.66	0.27	6	69.155	3564	27097		33564
18933	-4	4855	7.5	K5	34 06.834	0.32	2	72.060	-4 24 44.11	0.13	2	72.060				15611

18909 SDS, 9.8m-9.9m, 0°3, 199°.

18925 A 12654, 9.1m, 2°7, 166°.

CATALOG OF 23,001 STARS FOR 1950.0

497

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
18934	-18	5432	5.87	K0	19 34 09.347	0.20	4	71.381	-18 20 37.64	0.11	4	71.381	3565	27105	4339	15612
18935	-35	13597	8.3	F8	34 10.280	0.08	5	70.156	-35 21 12.43	0.05	5	70.156				15613
18936	+2	3939	8.8	K0	34 11.373	0.08	2	72.025	+2 56 08.50	0.06	2	72.025				15614
18937	-7	5006	5.04	B0	34 12.072	0.04	37	71.475	-7 08 24.70	0.05	35	71.472	737	27107	4340	30737
18938	-58	7627	6.18	G5	34 14.272	0.06	6	70.013	-58 05 47.24	0.19	6	70.013	3566	27108		33566
18939	-50	12588	9.0	K0	19 34 23.110	0.06	4	70.503	-50 34 22.88	0.07	4	70.503				2337
18940	-66	3444	8.6	K0	34 23.711	0.26	4	69.501	-66 10 14.08	0.21	4	69.501				20119
18941	-72	2408	8.9	K2	34 24.825	0.09	4	69.964	-72 26 12.49	0.11	4	69.964				20120
18942	-77	1370	7.65	K0	34 33.251	0.21	4	70.629	-77 41 25.49	0.22	4	70.629		27121		20121
18942	SP				34 33.325	0.10	4	68.561	-77 41 25.23	0.11	4	68.561		27121		20121
18943	-30	17230	7.98	F2	19 34 42.203	0.09	4	70.158	-30 24 31.69	0.12	4	70.158		27124		15615
18944	-48	13194	8.5	K0	34 48.927	0.08	4	70.031	-48 07 47.23	0.09	4	70.031				2338
18945	-66	3445	6.40	A0	34 56.515	0.10	6	69.437	-66 48 00.12	0.10	6	69.437	3567	27132	4342	33567
18946	-15	5410	8.9	K0	34 58.421	0.31	2	71.992	-14 52 45.95	0.27	2	71.992				15616
18947	-1	3790	8.7	B9	34 59.001	0.49	2	71.470	-1 08 51.46	0.55	2	71.470				15617
18948	-60	7306	8.8	F8	19 34 59.785	0.16	4	69.927	-59 58 21.64	0.08	4	69.927				15618
18949	-3	4656	8.5	A0	34 59.786	0.17	2	71.997	-2 48 44.85	0.09	2	71.997				15619
18950	-6	5213	8.3	K0	35 10.159	0.22	2	71.920	-6 15 26.92	0.10	2	71.920				15620
18951	-47	13012	8.9	F8	35 12.944	0.07	4	70.506	-47 37 43.50	0.16	4	70.506				2340
18952	-44	13455	8.5	G0	35 13.027	0.06	4	70.097	-44 29 21.36	0.09	4	70.097				2339
18953	-13	5423	8.5	G5	19 35 21.192	0.01	2	71.481	-12 52 19.57	0.28	2	71.481				15621
18954	-4	4865	8.6	A5	35 25.210	0.04	2	71.544	-4 43 20.56	0.38	2	71.544				15622
18955	-1	3795	8.6	B9	35 49.210	0.23	2	71.482	-1 02 14.44	0.17	2	71.482				15623
18956	-27	14159	8.3	K0	35 51.073	0.18	4	70.304	-27 29 09.89	0.12	4	70.304				15624
18957	-53	9625	8.7	K5	35 57.428	0.12	4	69.508	-53 25 30.90	0.16	4	69.508				15625
18958	-41	13618	8.2	K2	19 36 01.664	0.13	4	70.041	-41 18 02.66	0.04	4	70.041				2341
18959	-49	12765	8.8	K0	36 03.274	0.17	4	70.066	-49 40 19.17	0.08	4	70.066				2342
18960	-10	5143	8.3	A0	36 11.548	0.12	2	71.680	-10 27 14.36	0.26	2	71.680		27171		15626
18961	+0	4266	8.3	K5	36 13.953	0.52	2	70.091	+0 29 26.99	0.13	2	70.091				15627
18962	-40	13412	9.2	G5	36 14.696	0.09	4	70.559	-39 58 09.77	0.03	4	70.559				2343
18963	-13	5427	7.8	G5	19 36 17.410	0.16	2	71.995	-13 47 05.56	0.37	2	71.995				15628
18964	+3	4097	6.37	B3	36 18.743	0.05	4	71.524	+3 15 59.50	0.33	4	71.524	3569	27176	4346	15629
18965	-58	7637	8.4	K2	36 21.287	0.21	4	70.567	-58 35 08.92	0.20	4	70.567				15630
18966	-32	15380	7.9	K0	36 24.262	0.13	5	70.558	-32 35 19.17	0.14	5	70.558				15631
18967	+2	3950	8.8	A2	36 32.158	0.13	2	72.428	+2 19 35.36	0.33	2	72.428				15632
18968	-80	924	7.5	M1	19 36 32.318	0.09	4	70.710	-80 12 24.49	0.24	4	70.710				20122
18968	SP				36 32.315	0.18	4	70.055	-80 12 24.68	0.34	4	70.055				20122
18969	-3	4670	8.5	F0	36 35.872	0.19	2	71.495	-3 17 17.03	0.06	2	71.495				15633
18970	-65	3812	9.1	F5	36 38.855	0.17	4	70.024	-65 00 19.41	0.20	4	70.024				20123
18971	-37	13292	7.7	K5	36 44.643	0.11	4	70.557	-37 31 02.10	0.12	4	70.557				15634
18972	-63	4538	8.2	K0	19 36 45.717	0.18	4	69.965	-62 56 39.16	0.14	4	69.965				15635
18973	-30	17262	9.1	K0	36 46.061	0.03	4	70.612	-30 02 11.41	0.17	4	70.612				15636
18974	-21	5471	8.8	K7	36 46.275	0.15	3	69.553	-21 43 18.34	0.21	3	69.553				15637
18975	-38	13611	8.7	K2	36 50.585	0.14	4	70.796	-38 14 53.13	0.09	4	70.796				15638
18976	-34	13848	8.6	G5	36 50.824	0.16	4	70.786	-34 14 44.25	0.19	4	70.786				15639
18977*	-31	16935	8.8	K0	19 36 52.106	0.03	4	70.446	-31 43 29.20	0.14	4	70.446				15640
18978*	-22	5183	7.24	A0	36 57.209	0.11	4	70.000	-22 10 43.02	0.08	4	70.000				15641
18979	-62	6096	8.1	F8	36 57.766	0.21	4	69.968	-61 56 16.50	0.17	4	69.968				15642
18980	-7	5024	7.6	A2	36 59.185	0.07	2	70.492	-6 49 27.16	0.17	2	70.492				15643
18981	-42	14385	8.5	K0	37 11.948	0.20	4	70.678	-41 54 49.12	0.17	4	70.678				2344
18982	-20	5644	7.9	K5	19 37 13.267	0.29	4	71.033	-20 39 49.91	0.15	4	71.033		27196		15644
18983	-8	5062	7.60	G0	37 22.910	0.24	2	71.995	-8 05 40.38	0.13	2	71.995		27202		15645
18984	-17	5706	8.8	A0	37 25.085	0.02	2	72.019	-16 59 40.07	0.20	2	72.019				15646
18985	-72	2419	8.2	K5	37 29.018	0.12	4	69.921	-71 59 29.42	0.09	4	69.921				20124
18986	-0	3810	8.5	A2	37 29.104	0.17	2	71.985	-0 25 57.22	0.12	2	71.985				15647
18987	-16	5398	8.8	K0	19 37 30.069	0.18	2	72.177	-15 55 33.77	0.08	2	72.177				15648
18988	-78	1251	9.3	G5	37 34.316	0.22	4	70.484	-78 26 29.67	0.19	4	70.484				20125
18988	SP				37 34.156	0.10	4	70.736	-78 26 29.74	0.44	4	70.736				20125
18989	-55	9154	7.23	K2	37 36.658	0.09	4	70.540	-55 23 00.00	0.17	4	70.540		27208		15649
18990	-5	5036	6.76	K2	37 41.683	0.01	2	72.021	-5 33 50.88	0.19	2	72.021		27209		15650
18991	-16	5399	5.45	K0	19 37 51.665	0.03	57	71.050	-16 24 35.08	0.04	56	71.007	1512	27214	4352	31512
18992	-83	686	7.4	K5	38 00.075	0.19	4	71.288	-83 02 53.33	0.26	4	71.288				20126
18992	SP				38 00.065	0.20	4	70.557	-83 02 53.05	0.33	4	70.557				20126
18993	-23	15637	8.5	K0	38 04.202	0.06	3	70.728	-23 46 02.30	0.06	3	70.728				15651
18994	-0	3813	5.52	A0	38 08.779	0.06	6	70.396	-0 44 18.40	0.05	6	70.396	3573	27222		33573
18995	-57	9455	7.9	G5	19 38 11.551	0.13	4	70.316	-57 15 29.39	0.14	4	70.316				15652
18996	-45	13375	8.8	K0	38 11.968	0.11	4	70.530	-45 00 51.82	0.19	4	70.530				2345
18997	-2	5079	8.0	F8	38 18.928	0.43	2	71.680	-1 59 13.51	0.06	2	71.680				15653
18998	-33	14403	8.9	K0	38 27.928	0.13	4	70.454	-33 35 01.55	0.11	4	70.454				15654
18999	-25	14255	8.3	F0	38 33.589	0.14	3	70.517	-24 57 19.45	0.25	3	70.517				15655
19000	-4	4882	8.8	A0	19 38 45.520	0.15	2	70.572	-3 58 00.99	0.20	2	70.572				15656
19001	+13	4098	5.84	B3	38 46.552	0.18	6	70.578	+13 41 53.46	0.08	6	70.578	3574	27235		33574
19002	+17	4048	4.45	K0	38 48.139	0.03	74	71.051	+17 21 31.48	0.04	73	71.059	1513	27236	4353	81513
19003	-29	16446	8.4	K0	38 51.728	0.11	4	70.615	-29 25 03.17	0.10	4	70.615				15657
19004	-8	5073	8.6	K0	38 54.380	0.11	2	72.194	-8 44 48.83	0.22	2	72.194				15658

18977 SDS, 9.4m-9.9m, 0°6, 85°.

18978 A 12743, SDS, 7.9m-8.1m, 0°1, 140°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
19005	-43 13529	8.2	K2	19 39 14.614	0.11	4	70.513	-43 11' 39.00	0.08	4	70.513				2346
19006	+ 4 4190	9.0	K2	39 14.780	0.15	2	71.716	+ 4 36 36.92	0.04	2	71.716				15659
19007	-10 5155	9.0	K5	39 17.385	0.08	2	72.221	-10 12 38.41	0.52	2	72.221				15660
19008	- 9 5209	6.58	K2	39 19.224	0.38	2	72.002	- 9 18 40.96	0.29	2	72.002				15661
19009	-26 14430	8.2	K2	39 19.577	0.12	4	70.107	-26 33 45.04	0.25	4	70.107		27250		15662
19010	-24 15532	7.9	F0	19 39 35.867	0.08	4	69.471	-24 29 53.02	0.08	4	69.471				15663
19011	-58 7647	9.0	K0	39 36.114	0.11	4	69.972	-58 38 08.25	0.20	4	69.972				15664
19012	-16 5413	5.10	F0	39 39.679	0.04	42	71.319	-16 14 34.06	0.05	41	71.267	1514	27255	4356	31514
19013	-50 12638	8.0	K2	39 40.153	0.18	4	70.324	-50 17 49.17	0.11	4	70.324				2347
19014	-36 13674	7.54	K0	39 41.653	0.14	4	70.544	-36 06 03.68	0.09	4	70.544		27256		15665
19015	-48 13231	8.0	K0	19 39 41.889	0.10	4	70.540	-48 19 24.99	0.07	4	70.540				2348
19016	-51 12209	7.8	K2	39 42.267	0.22	4	69.892	-51 03 53.48	0.17	4	69.892				2349
19017	-18 5460	8.9	G0	39 56.843	0.15	2	72.509	-18 19 05.44	0.22	2	72.509				15666
19018	+ 1 4075	7.7	G0	39 57.269	0.06	2	72.140	+ 1 28 04.94	0.55	2	72.140		27265		15667
19019	-63 4540	8.6	M0	40 02.152	0.19	4	69.950	-63 05 52.62	0.22	4	69.950				15668
19020	-46 13174	8.5	K0	19 40 02.842	0.21	4	70.718	-46 46 30.73	0.13	4	70.718				2350
19021	- 6 5241	8.3	K0	40 05.537	0.22	2	70.531	- 6 35 34.83	0.41	2	70.531				15669
19022	-44 13506	7.36	K0	40 10.386	0.05	4	70.579	-44 15 12.94	0.08	4	70.579		27271		2351
19023	-32 15419	8.5	K2	40 16.524	0.07	4	70.825	-32 38 29.58	0.19	4	70.825				15670
19024	-37 13322	6.16	B8	40 17.373	0.13	6	69.373	-37 39 30.38	0.17	6	69.373	3576	27276	4359	33576
19025	-19 5561	8.5	K2	19 40 17.486	0.11	2	72.025	-19 13 54.18	0.06	2	72.025				15671
19026	-65 3818	9.1	G5	40 17.849	0.10	4	70.051	-65 35 16.89	0.13	4	70.051				20127
19027	+ 1 4077	8.7	K2	40 17.916	0.08	2	72.195	+ 1 24 43.28	0.09	2	72.195				15672
19028	-39 13411	8.8	K0	40 20.812	0.09	4	71.026	-39 01 32.84	0.09	4	71.026				15673
19029	-56 9268	7.8	K2	40 21.505	0.22	4	69.896	-56 23 30.41	0.30	4	69.896				15674
19030	-11 5096	8.5	K2	19 40 21.743	0.18	2	72.179	-11 16 15.40	0.10	2	72.179				15675
19031	-40 13448	9.3	K0	40 33.422	0.23	3	70.439	-40 33 24.33	0.19	3	70.439				2352
19032	-35 13655	8.4	G0	40 35.774	0.06	4	70.811	-35 22 18.27	0.19	4	70.811				15676
19033	-35 13659	8.7	G5	40 49.880	0.11	4	70.554	-35 12 30.88	0.18	4	70.554				15677
19034	+ 3 4124	8.0	A5	40 51.645	0.05	2	71.515	+ 4 03 15.87	0.06	2	71.515				15678
19035	+ 0 4290	8.3	B5	19 40 57.343	0.23	2	71.534	+ 0 33 19.95	0.05	2	71.534				15679
19036	-38 13647	8.1	A2	41 07.906	0.08	5	71.347	-37 57 54.78	0.05	5	71.347				15680
19037	- 2 5094	8.5	K0	41 10.198	0.13	2	71.572	- 2 04 45.58	0.09	2	71.572				15681
19038	-47 13067	8.7	G5	41 26.415	0.10	4	71.033	-47 49 08.30	0.11	4	71.033				2353
19039	-21 5500	8.7	G5	41 30.380	0.12	4	69.854	-20 54 31.73	0.12	4	69.854				15682
19040	-70 2702	8.8	K0	19 41 32.495	0.10	4	70.431	-70 45 53.91	0.25	4	70.431				20128
19041	-17 5732	8.1	A0	41 38.090	0.21	2	71.540	-17 31 17.23	0.29	2	71.540				15683
19042	+25 3933	5.45	G5	41 38.105	0.05	11	70.345	+25 39 04.32	0.12	10	70.333	1515	27305	4363	31515
19043	-33 14441	8.8	K5	41 43.202	0.19	3	70.498	-33 22 32.99	0.04	3	70.498				15684
19044	-51 12223	8.0	K5	41 52.017	0.18	4	71.383	-50 56 12.06	0.19	4	71.383				2354
19045	-52 11526	9.1	G8	19 41 53.411	0.19	4	70.057	-52 44 16.86	0.08	4	70.057				15685
19046	-30 17332	8.8	K0	41 57.238	0.15	4	70.130	-30 21 08.06	0.20	4	70.130				15686
19047	-54 9467	7.5	K2	41 58.837	0.15	4	70.013	-54 06 33.06	0.19	4	70.013				15687
19048	-68 3303	8.6	K0	41 58.945	0.09	4	69.870	-68 45 58.62	0.19	4	69.870				20129
19049	+ 4 4210	7.70	K5	42 03.018	0.20	2	71.558	+ 4 51 29.27	0.31	2	71.558		27314		15688
19050	-25 14308	8.5	K5	19 42 08.850	0.13	4	69.938	-25 29 52.67	0.11	4	69.938				15689
19051	-27 14243	8.30	K5	42 09.881	0.12	4	69.984	-27 31 04.94	0.17	4	69.984		27317		15690
19052	-77 1383	7.31	A0	42 17.418	0.12	6	70.084	-77 01 56.26	0.25	6	70.084	3578	27325		33578
19052 SP				42 17.475	0.13	6	69.945	-77 01 56.26	0.28	6	69.945	3578	27325		53578
19053	-43 13559	8.0	K2	42 21.886	0.12	4	70.549	-43 25 31.41	0.09	4	70.549				2355
19054	-13 5462	7.32	K0	19 42 22.215	0.18	2	71.943	-12 50 53.24	0.11	2	71.943			4366	15691
19055	-15 5455	8.6	K0	42 22.863	0.12	2	71.963	-15 13 55.18	0.03	2	71.963				15692
19056	-46 13197	8.5	K0	42 30.356	0.20	4	70.940	-46 18 14.41	0.13	4	70.940				2356
19057	+ 0 4302	8.8	A2	42 31.462	0.34	2	72.171	+ 0 37 45.92	0.07	2	72.171				15693
19058	- 3 4696	7.7	K0	42 32.627	0.03	2	70.502	- 3 09 26.46	0.34	2	70.502				15694
19059	-41 13670	9.3	K5	19 42 35.638	0.16	4	71.032	-41 02 59.52	0.09	4	71.032				2357
19060	- 4 4903	8.3	K0	42 37.155	0.06	2	72.187	- 4 38 41.66	0.07	2	72.187				15695
19061	- 1 3818	8.8	B9	42 37.452	0.11	2	72.235	- 1 07 50.89	0.44	2	72.235				15696
19062	-42 14438	9.2	G5	42 39.736	0.15	4	71.273	-42 23 19.29	0.18	4	71.273				2358
19063	-13 5465	8.8	G5	42 41.054	0.02	2	72.539	-13 23 04.23	0.10	2	72.539		27334		15697
19064	+ 2 3979	8.2	G5	19 42 41.731	0.22	2	70.628	+ 2 47 23.45	0.07	2	70.628				15698
19065	-82 783	8.0	K5	42 45.587	0.16	4	69.539	-82 17 14.74	0.11	4	69.539				20130
19065 SP				42 45.708	0.07	4	69.253	-82 17 14.44	0.01	4	69.253				20130
19066	-32 15443	5.56	B8	42 49.966	0.03	60	71.010	-32 01 51.49	0.03	60	71.010	1516	27337	4368	31516
19067	-22 5223	8.6	K2	42 57.031	0.06	4	69.992	-22 11 41.25	0.09	4	69.992				15699
19068	-31 17038	9.1	K2	19 42 59.660	0.03	3	69.889	-31 41 03.70	0.13	3	69.889				15700
19069	- 1 3821	7.34	K0	43 06.645	--	1	71.726	- 1 09 07.21	--	1	71.726		27340		15701
19070	-39 13437	8.0	K0	43 08.479	0.13	5	70.685	-39 32 54.62	0.12	5	70.685				15702
19071	- 3 4701	6.50	B3	43 15.366	0.12	6	69.970	- 3 00 21.77	0.15	6	69.970	3579	27344	4369	33579
19072	- 7 5057	8.6	K2	43 15.871	--	1	71.748	- 7 42 35.13	--	1	71.748				15703
19073	-20 5698	5.06	K0	19 43 26.609	0.04	34	71.456	-19 53 00.40	0.04	33	71.486	1517	27349	4370	31517
19074	- 4 4907	8.5	G5	43 30.996	--	1	72.460	- 4 18 26.02	--	1	72.460				15704
19075	-29 16512	8.9	A0	43 36.084	0.10	4	70.627	-29 43 30.96	0.12	4	70.627				15705
19076	-12 5523	8.4	G5	43 40.307	--	1	71.759	-12 00 24.84	--	1	71.759				15706
19077	-16 5433	8.4	M2	43 40.913	--	1	72.462	-16 19 56.64	--	1	72.462				15707

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
19078	-72	2445	5.52	A3	19 43 41.218	0.11	6	69.754	-72 37 42.06	0.11	6	69.754	3580	27351	4371	33580
19078	SP				43 41.225	0.10	34	71.383	-72 37 42.72	0.10	31	71.337	3580	27351	4371	53580
19079	+10	4043	2.80	K2	43 52.916	0.04	4	71.373	+10 29 24.09	0.12	4	71.373	741	27354	4372	30741
19080	-26	14504	7.6	K2	43 56.649	0.05	4	70.761	-26 36 49.94	0.04	4	70.761				15708
19081	-56	9290	5.52	A5	43 56.985	0.04	49	70.620	-56 29 08.50	0.04	48	70.562	739	27358	4373	30739
19082	+2	3986	8.4	K2	19 43 57.955	0.19	2	71.978	+2 44 07.44	0.25	2	71.978		27359		15709
19083	-24	15587	8.5	A3	44 07.229	0.19	4	70.716	-23 51 31.12	0.22	4	70.716				15710
19084*	-20	5705	8.3	G0	44 11.347	0.19	2	72.247	-20 00 15.59	0.29	2	72.247				15711
19085	-2	5112	8.7	K2	44 20.625	0.24	2	72.051	-2 23 38.99	0.02	2	72.051				15712
19086*	-8	5103	7.8	K0	44 25.626	0.20	2	72.132	-8 16 36.44	0.05	2	72.132				15713
19087	-10	5181	8.4	K0	19 44 25.803	--	1	71.718	-10 10 51.37	--	1	71.718				15714
19088	-61	6405	7.9	K0	44 29.275	0.18	4	70.921	-60 51 08.01	0.10	4	70.921				15715
19089	-23	15745	8.2	A3	44 30.334	0.13	4	71.070	-22 56 04.16	0.16	4	71.070				15716
19090	+4	4227	8.0	G5	44 33.465	0.17	2	72.175	+4 24 16.39	0.02	2	72.175				15717
19091	-66	3455	7.34	K2	44 40.268	0.09	4	70.547	-66 06 15.14	0.14	4	70.547		27373		20131
19092	-6	5263	7.8	K0	19 44 40.415	0.04	2	71.524	-6 28 01.52	0.49	2	71.524				15718
19093	-29	16528	7.46	G0	44 44.123	0.09	4	69.116	-29 17 02.83	0.19	4	69.116		27376		15719
19094	-73	2066	8.28	K5	44 44.634	0.13	4	70.663	-73 00 05.06	0.21	4	70.663		27377		20132
19095	-45	13430	8.9	F5	44 49.172	0.14	4	70.057	-45 06 08.36	0.15	4	70.057				2359
19096	-69	3054	7.41	K2	44 49.998	0.09	4	71.170	-69 27 53.40	0.18	4	71.170		27380		20134
19097	-88	169	8.3	G0	19 44 52.047	0.27	4	69.938	-87 57 38.65	0.41	4	69.938				20133
19097	SP				44 51.296	0.10	4	69.969	-87 57 38.18	0.25	4	69.969				20133
19098	-18	5487	9.1	F5	44 59.815	0.01	2	71.551	-18 31 44.08	0.01	2	71.551				15720
19099	+0	4314	6.83	G5	45 00.683	0.12	2	70.020	+0 57 58.36	0.16	2	70.020		27383		15721
19100	-53	9678	6.30	K0	45 02.167	0.10	7	70.081	-53 00 46.98	0.13	6	70.017	3581	27384	4374	33581
19101	-49	12853	8.0	M0	19 45 03.149	0.07	4	70.490	-49 39 00.24	0.16	4	70.490				2360
19102	-34	13936	8.5	K5	45 04.881	0.10	4	70.052	-34 44 28.77	0.15	4	70.052				15722
19103	-5	5060	7.8	A2	45 07.643	0.06	2	71.918	-5 21 29.94	0.27	2	71.918				15723
19104	+18	4240	3.78	*	45 09.432	0.08	9	71.438	+18 24 34.98	0.20	9	71.438	743	27391	4375	30743
19105	-55	9199	8.4	K0	45 14.812	0.19	4	70.620	-55 00 50.59	0.12	4	70.620				15724
19106	-0	3843	8.2	B8	19 45 16.186	0.14	2	71.484	-0 11 18.53	0.01	2	71.484				15725
19107	-38	13687	8.9	K0	45 18.653	0.14	4	70.048	-38 07 08.90	0.19	4	70.048				15726
19108	-48	13278	8.5	K5	45 19.049	0.08	4	70.060	-48 11 36.62	0.10	4	70.060				2361
19109	+3	4150	8.8	K0	45 25.447	0.27	2	70.129	+3 40 19.46	0.08	2	70.129				15727
19110	-62	6109	7.7	F8	45 27.018	0.14	4	71.235	-62 41 34.21	0.09	4	71.235				15728
19111	-60	7332	8.79	K5	19 45 30.397	0.08	4	71.555	-60 32 16.39	0.08	4	71.555		27400		15729
19112	-53	9681	8.9	F8	45 36.423	0.06	4	70.847	-53 00 32.76	0.15	4	70.847				15730
19113*	-55	9203	8.7	G5	45 36.924	0.06	5	71.707	-55 33 00.92	0.22	4	71.278				15731
19114	+8	4224	9.2v	G5	45 48.437	0.12	4	69.860	+9 11 01.46	0.12	4	69.860				27728
19115	-35	13717	9.1	K0	45 49.207	0.23	4	70.485	-35 17 50.13	0.14	4	70.485				15732
19116	-28	16188	8.3	K2	19 45 59.043	0.10	4	69.456	-28 32 11.79	0.13	4	69.456				15733
19117	-61	6413	6.42	B3	46 00.053	0.14	6	70.978	-61 11 16.14	0.12	6	70.978		27408		21161
19118	-50	12688	8.5	K5	46 00.734	0.12	5	70.685	-50 39 50.51	0.18	5	70.685				2362
19119	-60	7335	9.1	G5	46 01.352	0.23	4	70.738	-59 50 26.73	0.22	4	70.738				15734
19120	-33	14493	8.2	K0	46 03.100	0.10	4	70.547	-33 05 41.94	0.14	4	70.547				15735
19121	-29	16546	6.10	F0	19 46 04.698	0.12	6	69.398	-28 54 50.95	0.15	6	69.398	3582	27412	4378	33582
19122	-64	4004	7.9	G5	46 06.492	0.21	4	70.186	-64 04 45.66	0.21	4	70.186				15736
19123	-58	7668	9.2	G5	46 12.097	0.15	4	71.073	-58 47 09.92	0.12	4	71.073				15737
19124	-4	4926	7.8	A0	46 17.927	0.17	2	71.950	-4 37 19.54	0.18	2	71.950				15738
19125	-37	13370	9.0	K0	46 23.022	0.20	5	70.613	-36 57 41.59	0.08	5	70.613				15739
19126	-14	5561	8.6	K0	19 46 25.448	0.24	2	72.000	-14 43 13.05	0.30	2	72.000				15740
19127	-84	610	7.9	K5	46 28.232	0.42	4	70.602	-83 54 47.82	0.12	4	70.602				20135
19127	SP				46 28.175	0.11	4	70.115	-83 54 47.68	0.13	4	70.115				20135
19128	-13	5492	8.6	K5	46 30.444	0.18	2	71.987	-12 47 24.60	0.18	2	71.987				15741
19129	-9	5253	8.2	G5	46 31.305	0.07	2	72.142	-9 02 57.01	0.17	2	72.142				15742
19130	-30	17392	8.14	F0	19 46 33.484	0.15	4	70.752	-30 24 02.13	0.12	4	70.752		27426		15743
19131	-52	11547	8.56	K5	46 40.790	0.09	4	70.256	-52 21 43.08	0.11	4	70.256		27429		15744
19132	-32	15491	8.9	K0	46 48.178	0.08	4	70.579	-32 08 44.31	0.08	4	70.579				15745
19133	-21	5539	8.9	A5	46 48.404	0.10	4	71.267	-20 52 20.93	0.10	4	71.267				15746
19134	-81	868	6.32	K0	46 56.241	0.02	159	70.952	-81 28 48.17	0.03	157	70.920	1667	27434	4383	61667
19134	SP				19 46 56.257	0.02	236	71.102	-81 28 48.10	0.03	227	71.083	1667	27434	4383	71667
19135	-7	5072	8.9	A2	46 56.834	--	1	71.737	-6 55 22.75	--	1	71.737				15747
19136	-34	13956	9.0	F8	47 01.917	0.05	4	70.787	-34 47 27.61	0.06	4	70.787				15748
19137	+2	4000	7.8	F5	47 12.105	0.19	2	71.966	+2 49 37.15	0.17	2	71.966		27441		15749
19138	-23	15780	7.8	B9	47 17.445	0.17	4	70.034	-22 54 25.91	0.14	4	70.034				15750
19139	-27	14309	7.42	K0	19 47 18.183	0.13	4	69.985	-26 50 35.10	0.11	4	69.985		27444		15751
19140	-35	13737	9.3	K0	47 20.669	0.08	4	71.092	-35 12 47.03	0.14	4	71.092				15752
19141	-18	5504	8.7	F5	47 20.717	0.02	2	71.484	-18 04 51.12	0.11	2	71.484				15753
19142	-21	5542	8.9	A5	47 23.482	0.18	4	70.361	-21 46 11.42	0.25	4	70.361				15754
19143*	-10	5195	6.90	G5	47 25.401	0.19	2	72.023	-10 08 03.90	0.32	2	72.023		27448		15755
19144	-36	13724	8.8	F5	19 47 26.392	0.14	5	71.293	-36 35 50.13	0.15	5	71.293				15756
19145	-0	3852	8.9	K5	47 32.346	0.17	2	72.051	-0 05 20.25	0.16	2	72.051				15757
19146	-72	2457	7.5	K2	47 35.138	0.16	4	71.500	-72 36 08.74	0.25	4	71.500				20136
19147	-25	14375	8.3	K0	47 37.713	0.14	3	69.939	-25 25 58.67	0.22	3	69.939				15758
19148	-14	5565	8.4	B8	47 38.069	--	1	70.669	-14 03 04.96	--	1	70.669				15759

19084 A 12909, SDS, 8.7m-9.6m, 0°6, 8°.

19086 A 12911, 8.5m-8.9m, 0°2, 84°.

19104 M0+A0.

19113 SDS, 9.2m-9.8m, 0°8, 151°.

19114 9.2m to 10.0m.

19143 6.9m-11.0m, 0°9, 277°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
19149	-27	14312	8.13	G5	19 47 41.813	0.11	3	69.704	-27 28 40.28	0.04	3	69.704		27454		15760
19150	-46	13257	8.5	K0	47 46.530	0.13	4	70.701	-45 59 01.95	0.26	4	70.701				2363
19151	-64	4007	7.9	K2	47 47.704	0.10	4	71.031	-64 05 58.63	0.16	4	71.031				20137
19152	-57	9506	8.0	G5	47 52.472	0.18	4	70.801	-57 47 39.36	0.08	4	70.801				15761
19153	-45	13459	9.0	K0	48 00.360	0.10	4	71.080	-45 18 38.83	0.16	4	71.080				2364
19154	-11	5149	5.55	F0	19 48 01.712	0.03	50	71.081	-10 53 30.11	0.04	49	71.033	744	27465	4387	80744
19155	-35	13746	8.2	B9	48 01.814	0.04	4	70.747	-35 26 18.78	0.12	4	70.747				15762
19156	-43	13633	9.0	F5	48 09.554	0.11	4	71.167	-43 35 03.89	0.07	4	71.167				2365
19157	-59	7539	8.6	K2	48 14.259	0.14	4	71.219	-59 17 47.30	0.08	4	71.219				15763
19158	-31	17110	8.5	G5	48 15.737	0.10	4	71.084	-31 14 49.52	0.09	4	71.084				15764
19159	+ 8	4236	0.89	A5	19 48 21.353	0.08	11	71.093	+ 8 44 13.70	0.08	11	71.093	745	27470	4388	30745
19160	- 3	4730	8.3	G5	48 24.425	-	1	72.465	- 2 59 18.62	-	1	72.465				15765
19161	-51	12262	8.5	K2	48 26.500	0.08	4	70.790	-51 22 24.71	0.13	4	70.790				2366
19162	-40	13514	5.39	A0p	48 27.145	0.10	7	71.350	-40 00 10.82	0.06	6	71.498	3583	27474	4389	33583
19163	- 9	5267	8.1	K0	48 36.623	-	1	71.505	- 9 39 15.36	-	1	71.505				15766
19164	-38	13724	7.9	K2	19 48 37.628	0.10	5	71.105	-38 31 52.29	0.11	5	71.105				15767
19165	-19	5628	7.79	K2	48 41.306	-	1	71.737	-19 20 24.11	-	1	71.737		27485		15769
19166	-28	16228	7.6	K2	48 44.353	0.09	4	70.278	-28 41 08.92	0.14	4	70.278				15770
19167	-12	5559	8.6	F5	48 46.943	-	1	71.718	-11 56 59.52	-	1	71.718				15771
19168	-42	14516	9.2	G5	48 52.259	0.13	4	71.382	-42 45 06.57	0.34	3	70.702				2367
19169	+22	3833	4.91	B3	19 48 54.898	0.08	6	71.348	+22 28 53.71	0.23	6	71.348	3585	27493	4392	33585
19170	-13	5499	7.02	K2	48 57.484	0.16	2	72.213	-13 09 40.76	0.26	2	72.213		27497		15772
19171	-24	15641	8.5	F5	49 03.797	0.08	4	70.279	-24 34 03.01	0.17	4	70.279				15773
19172	-61	6420	8.5	G5	49 03.936	0.08	4	70.248	-61 37 12.15	0.13	4	70.248				15774
19173	-39	13491	9.0	K5	49 09.696	0.07	4	71.061	-39 35 31.32	0.06	4	71.061				15776
19174	-68	3321	8.2	K0	19 49 13.214	0.18	4	71.385	-68 17 22.16	0.17	4	71.385				20138
19175	-85	503	9.1	K2	49 15.134	0.16	4	70.056	-85 03 16.94	0.09	4	70.056				20139
19175	SP				49 15.064	0.10	4	69.982	-85 03 17.03	0.16	4	69.982				20139
19176	-44	13589	8.8	K0	49 15.255	0.02	3	70.284	-43 54 22.69	0.03	3	70.284				2368
19177	-56	9319	8.6	G5	49 24.239	0.05	4	71.380	-56 01 53.65	0.19	4	71.380				15777
19178	-37	13397	8.2	K2	19 49 27.374	0.15	4	70.465	-37 47 30.16	0.15	4	70.465				15778
19179	+ 1	4122	7.6	A2	49 28.347	-	1	71.740	+ 1 28 26.56	-	1	71.740				15780
19180	-67	3685	8.4	K2	49 32.741	0.18	4	70.515	-67 14 27.77	0.17	4	70.515				20140
19181	-26	14589	8.6	F0	49 43.413	0.08	4	70.530	-26 18 26.91	0.15	4	70.530				15783
19182	-69	3062	9.1	F2	49 52.414	0.09	4	70.918	-69 05 11.12	0.14	4	70.918				20141
19183	+24	3914	5.67	*	19 49 55.317	0.19	6	72.004	+24 51 45.73	0.25	6	72.004	3587	27516		33587
19184	+ 0	4337	3.7v	G0p	49 55.546	0.11	5	71.865	+ 0 52 33.09	0.09	5	71.865	746	27517	4395	30746
19185	-21	5556	8.7	B8	49 55.943	0.06	4	69.595	-21 11 47.85	0.12	4	69.595				15786
19186	-40	13530	9.0	K0	49 56.522	0.03	4	70.746	-40 30 08.28	0.14	4	70.746				2369
19187	- 6	5286	8.4	K5	50 04.829	0.22	2	72.190	- 6 01 30.67	0.16	2	72.190				15787
19188	-73	2076	8.6	K0	19 50 15.892	0.07	4	69.578	-73 40 38.39	0.32	4	69.578				20142
19189	-61	6426	6.32	A3	50 19.313	0.07	23	70.530	-61 18 07.53	0.07	23	70.655	1518	27526	4397	31518
19190	-38	13739	9.1	G0	50 22.626	0.12	4	71.088	-38 43 02.78	0.25	4	71.088				15788
19191	-32	15550	8.3	K0	50 27.285	0.16	4	70.710	-32 47 34.03	0.09	4	70.710				15789
19192	-49	12894	9.1	M1	50 30.566	0.07	3	70.591	-49 35 34.26	0.06	3	70.591				2370
19193	- 0	3864	8.5	K5	19 50 36.324	0.49	2	71.978	+ 0 11 41.87	0.43	2	71.978				15790
19194	- 4	4960	8.0	K5	50 40.643	0.08	2	72.563	- 4 42 12.82	0.01	2	72.563				15791
19195	- 3	4742	8.64	*	50 41.636	0.07	11	71.467	- 3 14 43.14	0.09	11	71.467	1519	27532	4398	31519
19196	-41	13749	8.7	F5	50 54.005	0.16	4	71.309	-40 56 39.14	0.09	3	70.605				2371
19197	- 4	4962	9.0	K2	51 06.502	-	1	72.465	- 3 52 37.18	-	1	72.465				15792
19198	-39	13512	8.4	G5	19 51 26.005	0.07	4	70.591	-39 32 13.02	0.20	4	70.591				15793
19199	-47	13147	7.85	K0	51 33.863	0.15	4	70.789	-46 55 28.84	0.05	4	70.789		27550		2372
19200	-12	5574	8.5	A5	51 40.829	0.11	2	71.988	-12 29 32.99	0.08	2	71.988				15794
19201	+ 4	4270	8.3	K0	51 41.862	0.19	2	71.571	+ 4 56 53.85	0.11	2	71.571				15795
19202	-46	13291	8.5	K0	51 46.157	0.17	4	70.882	-46 15 59.65	0.10	4	70.882				2373
19203	-42	14549	4.21	K0	19 51 49.047	0.05	39	71.056	-42 00 04.12	0.05	39	71.056	1520	27557	4400	31520
19204	-65	3833	8.6	K0	51 58.635	0.12	4	69.513	-65 39 56.26	0.16	4	69.513				20143
19205	-19	5647	8.7	K0	52 06.976	0.11	2	71.573	-18 53 59.66	0.58	2	71.573				15796
19206	-24	15679	8.0	K2	52 10.863	0.12	4	69.436	-24 02 24.06	0.11	4	69.436				15797
19207	-37	13428	9.0	K0	52 11.785	0.04	4	71.118	-37 26 46.68	0.10	4	71.118				15798
19208	-14	5585	8.9	A2	19 52 16.984	-	1	71.710	-13 54 57.10	-	1	71.710				15799
19209	-63	4552	7.9	K5	52 18.331	0.10	4	69.754	-63 36 24.65	0.05	4	69.754				15800
19210	-29	16636	8.46	G0	52 23.401	0.14	4	69.539	-29 13 46.86	0.09	4	69.539		27573		15801
19211	-31	17164	8.9	G0	52 24.158	0.10	4	69.881	-31 13 39.69	0.16	4	69.881				15802
19212	+ 2	4031	8.1	B8	52 24.209	0.01	2	70.911	+ 2 18 28.10	0.27	2	70.911				15803
19213	-54	9534	9.0	K0	19 52 26.162	0.14	4	70.071	-54 15 47.46	0.15	4	70.071				15804
19214	-43	13685	9.0	K0	52 33.848	0.18	4	70.755	-43 48 10.87	0.16	4	70.755				2374
19215	-21	5574	8.9	G5	52 34.665	0.07	4	71.133	-21 38 27.35	0.11	4	71.133				15806
19216p	- 1	3858	8.5	G0	52 37.272	-	1	71.726	- 0 58 30.31	-	1	71.726				15808
19217	-61	6431	8.4	G5	52 42.881	0.11	4	71.060	-61 45 29.38	0.19	4	71.060				15809
19218	-68	3335	8.3	G0	19 52 43.942	0.06	4	69.978	-67 57 42.00	0.18	4	69.978				20144
19219	-17	5795	9.0	F0	52 44.999	-	1	71.699	-17 41 37.42	-	1	71.699				15810
19220	-36	13778	8.8	K5	52 45.143	0.08	4	70.938	-36 48 04.04	0.15	4	70.938				15811
19221	- 0	3876	8.9	K5	52 47.308	0.32	3	71.327	+ 0 12 04.82	0.17	3	71.327				15812
19222	-26	14639	7.6	F5	52 49.002	0.15	4	70.279	-26 41 00.90	0.07	4	70.279				15813

19183 F5+A2.
19184 3.7m to 4.4m.

19195 F0p+A.
19216 A 13103AB, 11.8m, 2"8, 106°.

CATALOG OF 23,001 STARS FOR 1950.0

501

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
19223	+ 6	4357	3.90	K0	19 52 51.450	0.03	89	71.027	+ 6 16' 39.69	0.04	88	71.023	749	27587	4405	80749
19224	-50	12736	8.7	K0	52 54.716	0.08	4	70.490	-49 53 46.95	0.12	4	70.490				2375
19225	-20	5765	9.0	A0	53 05.376	0.14	4	71.314	-20 37 31.25	0.25	4	71.314				15814
19226	- 2	5147	8.7	A0	53 19.753	0.21	3	72.439	- 2 01 43.79	0.28	3	72.439				15815
19227	-46	13302	9.0	F8	53 23.828	0.12	4	70.778	-45 57 02.03	0.08	4	70.778				2376
19228	-33	14573	9.0	K2	19 53 23.845	0.15	4	70.918	-33 39 19.70	0.08	4	70.918				15816
19229	-27	14395	8.7	A2	53 31.170	0.08	4	70.080	-27 45 21.61	0.17	4	70.080				15817
19230	-47	13165	9.0	K0	53 31.409	0.18	4	70.630	-46 52 07.62	0.16	4	70.630				2377
19231	-16	5457	8.9	K5	53 31.505	--	1	71.644	-16 30 21.28	--	1	71.644				15818
19232	-69	3072	5.82	A3	53 33.053	0.11	6	69.334	-69 17 53.71	0.16	6	69.334	3589	27594	4407	33589
19233	-59	7552	7.84	K0	19 53 37.152	0.11	4	69.669	-59 39 38.06	0.27	4	69.669		27597		15819
19234	-23	15870	8.5	K0	53 40.761	0.09	4	70.871	-22 50 52.16	0.20	4	70.871				15820
19235	-57	9552	8.5	K0	53 41.794	0.38	4	70.562	-56 52 51.82	0.18	4	70.562				15821
19236	-60	7348	8.0	M0	53 43.223	0.10	4	70.465	-60 43 28.04	0.20	4	70.465				15822
19237	+11	4055	5.29	A2	53 52.163	0.15	6	69.312	+11 17 23.14	0.24	6	69.312	3590	27604	4408	33590
19238	-70	2738	8.8	K0	19 53 52.661	0.14	4	70.680	-70 24 14.64	0.08	4	70.680				20145
19239	-34	14035	8.1	K0	53 54.517	0.26	4	70.366	-34 41 47.58	0.20	4	70.366				15823
19240	-25	14457	8.4	F8	54 05.403	0.10	4	71.359	-25 13 25.34	0.14	4	71.359				15824
19241	-30	17497	8.0	G5	54 06.244	0.03	4	70.771	-30 20 04.29	0.12	4	70.771				15825
19242	-71	2503	8.7	K5	54 15.227	0.01	3	70.616	-71 21 17.18	0.12	3	70.616				20146
19243	-77	1399	8.6	K0	19 54 18.171	0.11	4	70.096	-77 34 25.67	0.13	4	70.096				20147
19243 SP					54 18.195	0.13	6	70.965	-77 34 25.33	0.40	5	71.138				20147
19244	-62	6121	9.3	K2	54 20.598	0.17	6	72.011	-62 23 38.89	0.24	5	71.729				15827
19245	- 9	5297	8.4	K2	54 24.236	0.20	2	72.003	- 9 16 19.62	0.00	2	72.003				15828
19246	-48	13359	8.5	F8	54 25.066	0.07	4	70.002	-48 16 08.56	0.18	4	70.002				2378
19247	- 1	3864	8.0	K2	19 54 26.511	0.02	2	71.982	- 1 07 18.55	0.14	2	71.982				15829
19248	-76	1378	7.4	K2	54 32.337	0.22	4	70.482	-76 22 08.46	0.07	4	70.482				20148
19248 SP					54 32.338	0.10	4	70.455	-76 22 09.13	0.12	4	70.455				20148
19249	- 0	3881	6.92	A0	54 39.719	0.22	2	72.119	+ 0 13 01.47	0.77	2	72.119		27625		15830
19250	- 7	5115	6.72	G5	54 43.970	0.15	2	72.034	- 6 49 54.36	0.35	2	72.034		27629		15831
19251	-54	9547	8.5	K2	19 54 46.093	0.09	4	70.691	-53 56 54.07	0.09	4	70.691				15832
19252	-10	5230	7.6	A0	54 49.655	0.07	2	72.154	-10 10 23.38	0.02	2	72.154				15833
19253	-73	2086	4.10	A0	54 51.071	0.04	48	70.666	-73 02 46.66	0.05	48	70.666	748	27631	4410	30748
19253 SP					54 51.078	0.06	57	71.287	-73 02 47.02	0.10	54	71.261	748	27631	4410	50748
19254	-28	16298	8.3	A3	54 54.200	0.07	4	70.776	-28 43 41.55	0.27	4	70.776				15834
19255	-35	13815	7.70	G5	19 54 55.042	0.07	4	70.707	-35 19 24.05	0.24	4	70.707		27633		15835
19256	-43	13713	8.0	K0	54 58.494	0.14	4	70.741	-42 49 06.56	0.06	4	70.741				2379
19257	-24	15712	8.5	K0	54 58.545	0.12	4	70.515	-24 34 09.56	0.17	4	70.515				15836
19258	-81	875	10.0	F8	54 59.133	0.18	4	70.975	-81 03 54.00	0.07	3	70.160				20149
19258 SP					54 58.988	0.10	4	70.561	-81 03 53.53	0.13	4	70.561				20149
19259	-57	9560	8.9	G0	19 54 59.681	0.09	4	71.082	-57 34 33.98	0.11	4	71.082				15837
19260	-15	5516	5.05	A0	55 06.968	0.03	56	71.394	-15 37 34.52	0.06	55	71.411	1522	27637	4413	31522
19261	+ 2	4044	8.9	K0	55 10.673	--	1	71.718	+ 2 51 12.20	--	1	71.718				15838
19262	+ 5	5124	8.5	F0	55 17.787	--	1	72.465	- 5 19 16.34	--	1	72.465				15839
19263	-15	5518	8.4	K2	55 19.916	0.12	2	71.538	-15 06 45.38	0.15	2	71.538				15840
19264	-32	15606	7.8	K0	19 55 19.998	0.16	4	70.576	-32 33 45.64	0.11	4	70.576				15841
19265	+16	4081	5.38	B9	55 29.166	0.11	6	70.043	+16 39 11.99	0.13	6	70.043	3592	27648		33592
19266	-31	17207	9.0	G5	55 29.664	0.21	3	69.546	-31 03 49.25	0.03	3	69.546				15842
19267	-75	1561	7.60	K2	55 31.457	0.11	4	71.238	-74 54 05.57	0.14	4	71.238		27650		20150
19268	-22	5289	8.1	K0	55 36.153	0.10	4	69.509	-22 23 16.47	0.13	4	69.509				15843
19269	-33	14611	8.9	K2	19 55 38.631	0.07	4	70.548	-33 32 56.88	0.15	4	70.548				15844
19270	-40	13590	9.2	K0	55 54.721	0.15	3	71.204	-39 49 51.31	0.10	3	71.204				15845
19271	- 3	4757	7.14	K5	55 55.087	0.27	2	71.993	- 3 41 24.28	0.15	2	71.993		27659		15846
19272	-51	12320	7.8	K0	56 01.735	0.13	4	70.185	-50 59 34.03	0.24	4	70.185				2380
19273	-10	5234	8.8	K5	56 07.188	--	1	71.748	-10 28 47.24	--	1	71.748				15847
19274	+ 1	4159	6.84	K0	19 56 11.721	0.09	2	72.243	+ 1 31 48.56	0.02	2	72.243		27664		15848
19275	-49	12944	8.5	G5	56 17.667	0.14	5	71.289	-49 06 45.84	0.14	5	71.289				2381
19276	-43	13727	8.6	K5	56 22.581	0.21	4	70.922	-43 06 47.26	0.21	4	70.922				2382
19277	-53	9752	7.5	K2	56 26.135	0.13	4	70.788	-52 49 27.50	0.07	4	70.788				15849
19278	-55	9276	8.3	M0	56 27.298	0.16	4	70.797	-55 43 14.28	0.18	4	70.797				15850
19279	-35	13831	4.39	B3	19 56 29.134	0.05	34	71.159	-35 24 47.99	0.04	34	71.159	751	27670	4416	30751
19280	+19	4229	3.71	K5	56 32.024	--	1	69.349	+19 21 19.08	--	1	69.349	752	27672	4417	30752
19281	+ 1	4161	8.8	K0	56 32.729	--	1	70.742	+ 1 27 38.25	--	1	70.742				15851
19282	-75	1564	8.3	F8	56 33.958	0.08	4	69.953	-75 29 18.18	0.28	4	69.953				20151
19282 SP					56 33.890	0.15	4	70.046	-75 29 17.57	0.31	4	70.046				20151
19283	-78	1281	8.3	K0	19 56 35.576	0.29	4	70.115	-78 24 07.93	0.15	4	70.115				20152
19283 SP					56 35.505	0.32	4	70.109	-78 24 08.42	0.33	4	70.109				20152
19284	- 8	5186	7.9	K0	56 42.417	0.05	2	72.538	- 8 13 35.96	0.14	2	72.538				15852
19285	-49	12949	6.25	K0	56 43.960	0.11	6	70.011	-49 29 19.43	0.13	6	70.011	3595	27678		33595
19286	-12	5607	7.7	A5	56 48.105	--	1	71.726	-11 51 14.25	--	1	71.726				15853
19287	+ 0	4375	6.35	G5	19 56 50.141	0.11	7	71.336	+ 1 14 23.84	0.13	7	71.336	3596	27681	4419	33596
19288	-58	7692	7.37	K0	56 53.089	0.13	4	69.955	-58 31 31.81	0.06	4	69.955		27682		15854
19289	- 2	5159	6.61	A2	57 05.662	0.30	2	71.981	- 2 06 27.65	--	1	71.505		27691	4421	15855
19290	-38	13804	9.3	M0	57 06.457	0.03	4	71.270	-37 52 07.55	0.17	4	71.270				15856
19291	-45	13549	5.95	A5	57 16.152	0.16	6	69.603	-45 15 04.49	0.15	6	69.603	3597	27697	4422	33597

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
19292	+	3 4219	8.5	K0	19 57 18.074	0.02	2	71.574	+ 3 52 27.79	0.17	2	71.574				15857
19293	-	40 13601	8.0	M0	57 18.731	0.11	4	70.527	-40 20 17.75	0.12	4	70.527				2383
19294	-	26 14705	8.6	K5	57 22.625	0.12	4	70.322	-26 02 07.69	0.13	4	70.322				15858
19295	+	0 4379	8.7	K2	57 24.482	0.10	2	71.563	+ 0 30 33.30	0.06	2	71.563				15859
19296	-	64 4018	9.1	F8	57 24.581	0.14	4	70.703	-64 12 54.45	0.18	4	70.703				20153
19297	-	21 5588	8.92	A2	19 57 26.797	0.05	4	70.335	-20 59 42.23	0.12	4	70.335		27700		15860
19298	-	28 16332	7.00	K0	57 30.402	0.24	4	69.524	-28 43 28.67	0.09	4	69.524		27703		15861
19299	-	59 7564	5.12	M3	57 32.737	0.08	7	69.918	-59 30 52.56	0.14	6	69.827	3598	27704		33598
19300	-	66 3466	8.3	K0	57 35.913	0.12	4	70.419	-66 13 58.09	0.17	4	70.419				20154
19301	-	20 5784	7.83	K0	57 36.170	0.17	2	70.147	-19 59 43.05	0.04	2	70.147		27705		15862
19302	-	42 14615	8.5	F2	19 57 38.281	0.09	4	70.831	-42 18 30.47	0.19	4	70.831				2384
19303	-	16 5478	7.6	F5	57 39.569	0.30	2	71.972	-16 01 29.91	0.14	2	71.972				15863
19304	-	53 9763	8.2	K0	57 40.898	0.18	4	71.340	-53 07 14.67	0.19	4	71.340				15864
19305	-	55 9283	9.0	K0	57 45.764	0.06	4	71.242	-55 39 38.14	0.20	4	71.242				15865
19306	-	18 5563	8.5	M1	57 49.229	0.19	2	72.027	-18 25 40.50	0.25	2	72.027				15866
19307	+	2 4058	6.79	G5	19 57 50.765	0.13	2	70.506	+ 3 11 37.59	0.11	2	70.506		27715		15867
19308	-	4 4992	7.8	K2	58 10.370	0.01	2	72.172	- 4 27 00.45	0.53	2	72.172				15868
19309	-	21 5595	8.6	F0	58 12.820	0.12	4	70.207	-21 36 07.17	0.26	4	70.207				15869
19310	-	37 13484	7.52	K2	58 16.316	0.08	4	70.615	-36 49 04.86	0.04	4	70.615		27733		15870
19311	-	34 14090	8.5	K0	58 17.590	0.15	5	70.603	-34 15 42.63	0.08	5	70.603				15871
19312	-	38 13813	8.2	K2	19 58 17.761	0.26	4	70.383	-38 33 22.81	0.06	4	70.383				15872
19313	-	14 5613	7.16	K0	58 18.148	0.30	2	71.566	-14 04 47.46	0.03	2	71.566			4424	15873
19314	-	79 1052	7.76	A2	58 20.394	0.06	5	70.418	-79 33 52.53	0.06	5	70.418		27734		20155
19314	SP				58 20.466	0.12	4	70.065	-79 33 52.41	0.23	3	69.706		27734		20155
19315	-	12 5617	8.7	K0	58 25.142	0.18	2	72.199	-11 59 25.74	0.09	2	72.199				15874
19316	-	23 15935	6.08	G5	19 58 25.695	0.09	6	70.000	-22 52 34.61	0.10	6	70.000	3600	27737		33600
19317	-	30 17569	8.7	K5	58 28.218	0.10	4	69.794	-29 55 39.63	0.16	4	69.794				15875
19318	-	11 5199	8.1	A0	58 30.497	0.28	2	72.190	-10 55 12.85	0.04	2	72.190				15876
19319	-	15 5534	7.8	A2	58 30.701	0.13	2	72.123	-14 52 55.91	0.03	2	72.123				15877
19320	-	46 13343	7.83	K0	58 39.473	0.05	4	70.663	-46 04 47.15	0.21	4	70.663		27744		2385
19321	-	43 13753	9.0	K2	19 58 47.581	0.06	4	70.756	-43 37 41.50	0.03	4	70.756				2386
19322	-	6 5339	8.5	K2	58 55.451	0.26	2	71.972	- 6 30 51.10	0.18	2	71.972				15878
19323	-	2 5168	9.0	G0	59 01.436	0.08	2	71.692	- 1 48 38.65	0.19	2	71.692				15879
19324	+	27 3587	4.74	A5	59 02.490	0.04	59	71.240	+27 36 51.13	0.06	59	71.240	1523	27753	4428	81523
19325	-	41 13817	9.5	K0	59 05.453	0.08	3	71.023	-41 40 02.41	0.12	3	71.023				2387
19326	-	35 13857	8.9	K2	19 59 09.232	0.11	4	70.568	-35 24 52.79	0.11	4	70.568				15880
19327	-	83 693	8.2	F8	59 22.486	0.16	4	69.556	-82 56 54.53	0.08	4	69.556				20156
19327	SP				59 22.564	0.04	4	69.994	-82 56 54.36	0.18	4	69.994				20156
19328	-	5 5138	6.68	A0	59 31.640	0.07	6	69.955	- 5 07 47.62	0.08	6	69.955	3601	27761		33601
19329	-	5 5137	8.6	A0	59 31.688	0.09	2	71.481	- 4 57 45.48	0.10	2	71.481				15881
19330	-	28 16355	4.60	M3	19 59 35.212	0.03	62	70.871	-27 51 01.37	0.04	62	70.871	753	27763	4429	30753
19331	-	7 5151	8.7	K5	59 42.199	0.18	2	71.502	- 7 22 29.94	0.19	2	71.502				15882
19332	-	13 5557	8.6	A0	59 48.028	0.08	2	71.573	-12 50 53.11	0.10	2	71.573				15883
19333	-	35 13864	8.17	K0	59 50.127	0.05	6	70.424	-35 27 41.88	0.13	6	70.424				21162
19334	-	62 6131	9.2	G5	59 55.488	0.16	4	69.423	-62 27 50.01	0.15	4	69.423				15884
19335	-	3 4771	7.3	G5	20 00 00.690	-	1	72.362	- 3 28 57.84	-	1	72.362				15885
19336	-	47 13223	8.0	F5	00 05.983	0.14	4	70.524	-47 07 32.91	0.19	4	70.524				2388
19337	-	1 3685	8.6	K0	00 10.443	0.20	3	71.219	- 0 44 50.06	0.17	3	71.219				15886
19338	-	9 5336	8.4	K0	00 13.792	0.17	2	72.181	- 8 57 10.76	0.33	2	72.181				15887
19339	-	17 5839	8.0	K0	00 13.838	0.02	2	70.483	-17 29 20.41	0.07	2	70.483				15888
19340	-	54 9582	8.4	K2	20 00 14.027	0.22	4	70.334	-54 18 48.85	0.15	4	70.334				15889
19341	-	38 13828	4.79	K5	00 14.481	0.11	6	69.427	-38 04 52.06	0.11	6	69.427	3602	27779	4430	33602
19342	-	40 13630	8.0	K2	00 17.219	0.23	4	70.350	-40 06 57.11	0.10	4	70.350				2389
19343	-	51 12355	9.0	M0	00 17.649	0.13	4	69.118	-51 21 14.40	0.03	4	69.118				2390
19344	-	23 15955	8.2	K0	00 31.032	0.14	4	70.370	-23 05 50.12	0.08	4	70.370				15890
19345	-	6 5348	9.0	A0	20 00 35.574	0.07	2	71.555	- 5 55 26.01	0.25	2	71.555				15891
19346	+	4 4325	6.80	K5	00 43.470	0.09	7	69.841	+ 4 35 19.97	0.16	6	69.737	3603	27796		33603
19347	-	24 15785	8.6	K5	01 02.572	0.15	4	70.064	-24 29 41.52	0.19	4	70.064				15892
19348	-	59 7571	8.2	K2	01 07.684	0.10	4	69.464	-59 40 58.96	0.18	4	69.464				15893
19349	-	48 13404	9.2	K0	01 08.399	0.11	4	69.993	-48 18 10.21	0.05	4	69.993				2391
19350	-	32 15682	5.05	K0	20 01 09.608	0.07	6	69.554	-32 11 54.02	0.13	6	69.554	3606	27811	4431	33606
19351	-	70 2765	8.7	M2	01 13.587	0.16	4	70.495	-70 29 29.66	0.07	4	70.495				20157
19352	-	30 17613	7.4	K2	01 17.037	0.15	4	69.064	-30 18 29.41	0.04	4	69.064				15895
19353	-	9 5343	7.9	A0	01 17.099	0.06	2	72.160	- 9 16 06.48	0.00	2	72.160				15894
19354	-	28 16379	7.44	K2	01 21.491	0.09	4	69.942	-27 53 21.91	0.13	4	69.942		27815		15896
19355	-	36 13867	8.2	K0	20 01 24.521	0.15	4	70.486	-36 08 53.20	0.03	4	70.486				15897
19356	-	57 9596	8.9	A2	01 38.333	0.15	4	70.056	-57 45 38.15	0.22	4	70.056				15898
19357	+	6 4416	5.65	K0	01 41.766	0.03	88	71.754	+ 7 08 08.22	0.03	88	71.754	1524	27824	4433	31524
19358	-	53 9784	8.1	K2	01 41.845	0.07	4	70.002	-52 50 10.27	0.13	4	70.002				15899
19359	-	77 1406	8.17	K2	01 44.106	0.06	4	70.433	-77 14 11.48	0.17	4	70.433		27827		20158
19359	SP				20 01 44.113	0.16	4	69.058	-77 14 10.89	0.22	4	69.058		27827		20158
19360	-	65 3840	8.0	K0	01 53.703	0.14	4	70.808	-64 58 57.75	0.19	4	70.808				20159
19361	-	21 5609	7.11	G5	02 01.697	0.12	6	69.884	-21 27 24.08	0.09	6	69.884	3607	27840	4434	33607
19362	-	27 14515	7.08	A0	02 09.143	0.20	4	69.870	-26 57 22.36	0.11	4	69.870		27842	4435	15900
19363	+	0 4408	8.0	G5	02 13.890	0.01	2	71.514	+ 1 00 48.37	0.71	2	71.514				15901

CATALOG OF 23,001 STARS FOR 1950.0

503

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
19364	-10 5267	8.4	A0	20 02 15.842	0.23	2	72.000	-10 43 26.65	0.26	2	72.000				15902
19365	-12 5641	6.46	F5	02 19.786	0.01	2	72.157	-11 44 32.62	0.01	2	72.157				15903
19366	-34 14139	9.0	K2	02 20.129	0.18	4	70.462	-34 02 44.05	0.12	4	70.462		27850		15904
19367	+ 2 4085	8.4	A0	02 23.476	0.09	2	72.034	+ 2 17 55.80	0.18	2	72.034				15905
19368	-16 5498	8.1	K5	02 31.158	0.23	2	70.072	-16 30 59.23	0.27	2	70.072		27854		15906
19369	-13 5567	8.6	K2	20 02 31.777	0.21	2	72.188	-13 00 13.25	0.05	2	72.188				15907
19370	-45 13603	8.1	F5	02 31.941	0.07	4	70.832	-45 07 25.89	0.10	4	70.832				2392
19371	- 8 5217	8.0	A3	02 31.970	0.01	2	72.175	- 8 14 56.10	0.23	2	72.175				15908
19372	-60 7367	8.1	K0	02 33.010	0.12	4	70.562	-60 30 17.99	0.18	4	70.562				15909
19373	+ 1 4196	6.67	F8	02 38.388	0.01	2	72.044	+ 1 58 35.12	0.50	2	72.044		27857		15910
19374	- 6 5360	8.90	A2	20 02 39.703	0.06	2	71.555	- 6 43 41.71	0.25	2	71.555		27860		15911
19375	+ 0 4411	6.92	A0	02 46.921	-	1	71.737	+ 0 18 40.04	-	1	71.737		27863		15912
19376	-15 5554	8.6	K0	02 53.635	0.16	3	71.276	-15 34 00.82	0.22	2	71.042		27867		15913
19377	-51 12378	8.5	K2	02 53.810	0.17	3	69.724	-50 49 10.06	0.36	3	69.724				2393
19378	+19 4277	5.26	K0	02 56.387	0.08	7	69.578	+19 50 48.82	0.11	6	69.431	3609	27868	4438	33609
19379	-50 12807	9.0	K2	20 03 01.984	0.12	4	70.773	-49 51 05.26	0.12	4	70.773				2394
19380	+ 3 4243	8.4	G5	03 03.004	-	1	71.732	+ 3 21 36.96	-	1	71.732		27871		15914
19381	-61 6453	8.5	K2	03 05.219	0.04	4	69.848	-61 37 20.15	0.16	4	69.848				15915
19382	-72 2493	8.8	K0	03 07.966	0.04	3	71.252	-71 48 51.29	0.14	3	71.252				20160
19383	-68 3355	8.9	G5	03 09.398	0.20	4	70.811	-67 53 31.62	0.12	4	70.811				20161
19384	-21 5614	8.4	K0	20 03 11.865	0.04	4	69.866	-21 08 39.30	0.10	4	69.866				15916
19385	+ 3 4244	7.9	K2	03 12.587	-	1	71.688	+ 3 21 43.07	-	1	71.688				15917
19386	-37 13528	8.4	K5	03 25.138	0.20	4	70.694	-37 14 01.13	0.14	4	70.694				15918
19387	-44 13734	8.34	K2	03 25.552	0.13	5	71.283	-44 26 51.49	0.08	5	71.283		27877		2395
19388	+ 4 4341	6.74	A0	03 26.900	-	1	71.677	+ 4 37 52.66	-	1	71.677		27878		15919
19389	-53 9794	4.86	M0	20 03 33.807	0.03	94	71.124	-53 01 32.99	0.03	94	71.102	755	27879	4440	30755
19390	-25 14553	8.4	K5	03 35.177	0.16	4	70.110	-25 43 15.90	0.14	4	70.110				15920
19391	-18 5593	8.3	G5	03 36.643	0.06	2	71.992	-18 27 08.79	0.09	2	71.992				15921
19392	- 2 5178	8.0	F5	03 36.913	0.05	2	71.578	- 1 51 45.72	0.11	2	71.578			4442	15922
19393	-26 14789	7.6	K2	03 44.417	0.11	4	69.920	-26 34 46.59	0.12	4	69.920				15923
19394	-29 16802	7.5	K0	20 03 48.369	0.04	4	69.807	-29 33 36.03	0.05	4	69.807				15924
19395	-66 3474	3.64	G5	03 54.570	0.03	74	70.698	-66 19 07.02	0.04	72	70.663	754	27886	4444	30754
19396	-39 13618	8.4	G5	03 56.458	0.13	6	71.202	-39 29 51.53	0.08	6	71.202				15925
19397	- 4 5016	7.13	A0	03 57.970	0.02	2	71.712	- 4 33 43.75	0.07	2	71.712		27888		15926
19398	-35 13923	9.0	G5	04 03.688	0.23	3	70.553	-35 05 11.66	0.17	3	70.553				15927
19399	-12 5645	7.49	A3	20 04 03.844	-	1	70.742	-12 35 04.96	-	1	70.742		27891		15928
19400	-56 9414	7.8	K0	04 04.318	0.13	4	70.778	-55 59 12.83	0.15	4	70.778				15929
19401	-73 2105	8.6	K2	04 07.454	0.09	4	70.845	-72 54 32.67	0.20	4	70.845				20162
19402	-38 13866	9.3	M4	04 10.730	0.12	3	71.814	-38 40 31.78	0.12	3	71.814				15930
19403	- 0 3911	8.5	K2	04 16.411	-	1	71.650	- 0 16 42.18	-	1	71.650		4445		15931
19404	-43 13808	9.0	G5	20 04 20.881	0.06	4	70.557	-43 45 42.21	0.19	4	70.557				2396
19405	-19 5714	7.8	G5	04 26.797	0.21	2	72.000	-19 43 04.63	0.47	2	72.000				15932
19406	-84 614	9.7	K0	04 27.585	0.28	3	70.301	-84 14 24.64	0.16	3	70.301				20163
19406 SP				04 27.516	0.16	5	70.471	-84 14 24.89	0.23	4	70.564				20163
19407	-32 15722	8.6	K5	04 33.340	0.26	4	70.397	-32 45 07.82	0.09	4	70.397				15933
19408	-33 14730	9.2	K0	20 04 35.610	0.19	4	70.858	-32 59 51.99	0.17	4	70.858				15934
19409	-31 17322	8.6	G0	04 37.965	0.29	4	69.589	-30 59 51.77	0.19	4	69.589				15935
19410	-24 15814	7.8	K5	04 41.215	0.06	4	69.929	-24 01 41.50	0.11	4	69.929				15936
19411	-76 1388	8.8	K2	04 42.731	0.24	4	70.010	-76 45 44.66	0.10	4	70.010				20164
19411 SP				04 42.764	0.11	4	69.044	-76 45 44.43	0.27	4	69.044				20164
19412	+23 3896	5.08	B3	20 04 44.426	0.08	6	69.747	+23 28 09.10	0.11	6	69.747	3611	27910	4447	33611
19413	- 0 3913	8.5	A0	04 47.572	0.15	2	72.181	- 0 26 11.57	0.21	2	72.181				15937
19414	-40 13683	9.0	K0	04 47.676	0.18	4	71.117	-40 31 34.75	0.13	4	71.117				2397
19415	-53 9802	8.8	K0	04 52.392	0.20	4	71.354	-53 39 44.08	0.10	4	71.354				15938
19416	-56 9421	8.4	K0	04 55.657	0.12	3	71.185	-56 12 26.49	0.02	2	71.555				15939
19417	-47 13257	9.0	K0	20 04 58.254	0.15	4	70.832	-47 27 29.06	0.08	4	70.832				2398
19418	-54 9621	8.1	K2	05 11.635	0.11	4	70.066	-54 27 29.17	0.26	4	70.066				15940
19419	+ 2 4093	7.09	A5	05 12.404	0.08	2	70.618	+ 2 17 49.65	0.04	2	70.618		27921		15941
19420	- 7 5177	6.93	B8	05 26.968	0.06	2	72.041	- 6 54 26.52	0.61	2	72.041		27931		15942
19421	-64 4025	7.66	K5	05 32.571	0.04	4	70.068	-63 48 22.12	0.15	4	70.068		27933		15943
19422	-30 17680	9.0	K5	20 05 41.304	0.09	4	70.370	-30 02 20.98	0.19	4	70.370				15944
19423	-58 7718	7.9	K2	05 42.242	0.07	4	70.116	-58 09 15.89	0.21	4	70.116				15945
19424	-10 5285	6.17	A0	05 47.328	0.15	2	72.011	-10 12 32.63	0.07	2	72.011		27939		15947
19425	-14 5648	8.5	G5	05 47.338	0.15	2	71.698	-14 24 02.43	0.01	2	71.698				15946
19426	- 5 5169	8.5	K0	05 54.881	0.18	2	71.543	- 5 14 49.70	0.04	2	71.543				15948
19427	-44 13755	7.73	K0	20 05 58.295	0.25	4	70.332	-44 03 51.28	0.08	4	70.332		27943		2399
19428	-15 5565	8.6	M1	06 00.047	0.19	2	70.051	-15 33 32.36	0.15	2	70.051				15949
19429	-26 14819	7.22	F8	06 03.296	0.05	4	70.357	-26 22 13.95	0.17	4	70.357		27945		15950
19430	-45 13643	8.2	K0	06 11.544	0.05	4	71.233	-45 30 51.29	0.20	4	71.233				2400
19431	+10 4189	6.23	B5	06 15.168	0.11	6	69.967	+10 34 44.21	0.18	6	69.967	3616	27951	4451	33616
19432	-32 15751	8.7	K5	20 06 16.435	0.12	5	70.582	-32 12 28.19	0.17	5	70.582				15951
19433	-34 14182	8.5	K0	06 24.449	0.22	4	70.611	-34 40 48.78	0.16	4	70.611				15952
19434	+ 1 4212	8.4	G0	06 28.923	0.01	2	71.991	+ 1 30 08.70	0.29	2	71.991				15953
19435	-64 4027	8.5	K0	06 29.305	0.48	4	69.664	-64 27 52.07	0.22	4	69.664				20165
19436	-42 14714	8.5	M0	06 34.535	0.15	4	70.791	-41 59 39.15	0.14	4	70.791				2401

No	DM	Number	m _v	Sp	R A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	PK4	GC	N30	No*
19437	-	3 4793	7.9	F0	20 06	43.811	0.16	2	71.021	- 2 44	53.08	0.02	2	71.021				15954
19438	-	35 13957	8.0	A3	06	46.110	0.15	4	70.309	- 35 29	03.19	0.06	4	70.309				15953
19439	-	3 4794	8.4	A2	06	46.446	0.23	2	71.991	- 3 06	04.74	0.04	2	71.991				15956
19440	-	1 3902	7.6	K0	06	48.143	0.07	2	72.006	- 1 25	18.03	0.29	2	72.006				15957
19441	-	22 5346	9.0	G0	06	48.220	0.09	4	70.008	- 22 17	33.81	0.11	4	70.008				15958
19442	-	2 5188	8.7	K0	20 06	48.623	0.07	2	72.019	- 1 47	08.65	0.25	2	72.019				15959
19443	-	8 5249	8.6	K0	06	50.166	0.01	2	72.166	- 8 33	43.63	0.12	2	72.166				15961
19444	-	38 13886	7.9	K2	06	50.232	0.06	4	70.535	- 38 42	51.35	0.17	4	70.535				15960
19445	-	33 14761	9.1	K0	06	51.019	0.24	4	71.018	- 33 34	46.92	0.05	3	70.219				15962
19446	-	37 13569	8.1	K2	06	52.789	0.16	4	71.146	- 36 48	10.25	0.14	4	71.146				15963
19447	-	41 13893	9.0	F5	20 06	55.044	0.06	4	71.589	- 41 17	40.23	0.12	4	71.589				2402
19448	-	36 13930	9.2	M1	06	55.125	0.22	4	71.343	- 36 02	14.46	0.19	4	71.343				15964
19449	-	28 16458	8.5	A2	07	01.638	0.07	3	69.631	- 27 50	41.11	0.14	3	69.631				15965
19450	-	46 13418	9.0	M0	07	01.805	0.10	4	71.081	- 46 21	09.82	0.14	4	71.081				2403
19451	-	69 3096	8.6	K0	07	02.625	0.10	4	71.288	- 69 21	27.45	0.11	4	71.288				20166
19452	-	25 14589	7.24	F0	20 07	06.100	0.13	4	69.957	- 25 25	55.79	0.12	4	69.957	27968			15966
19453	+	4 4360	8.8	K5	07	08.097	0.07	2	72.248	+ 4 50	58.73	0.35	2	72.248				15967
19454	-	31 17359	8.7	K0	07	10.393	0.09	3	70.571	- 31 40	10.16	0.23	3	70.571				15968
19455	-	13 5593	8.3	F8	07	13.927	0.12	2	72.205	- 13 11	40.63	0.08	2	72.205				15969
19456	-	39 13653	8.5	K5	07	14.796	0.08	4	71.025	- 39 21	38.98	0.09	4	71.025				15970
19457	-	11 5245	8.8	A0	20 07	22.487	--	1	71.606	- 11 30	18.97	--	1	71.606				15971
19458	-	49 13018	8.7	F8	07	27.014	0.22	4	71.185	- 49 15	14.09	0.05	4	71.185				2404
19459	-	47 13277	8.5	G5	07	29.259	0.09	4	71.059	- 47 21	48.62	0.17	4	71.059				2405
19460	-	19 5731	7.26	F8	07	31.696	--	1	71.726	- 19 31	51.34	--	1	71.726	27978			15972
19461	+	9 4425	9.0v	A0	07	36.010	0.03	4	69.448	+ 10 12	05.28	0.08	4	69.448				27815
19462	+	3 4273	8.9	A3	20 07	42.198	--	1	71.740	+ 3 30	53.78	--	1	71.740				15973
19463	-	44 13775	6.70	G5	07	47.978	0.14	6	69.646	- 43 48	41.30	0.15	6	69.646	3617	27990	4455	33617
19464	-	52 11634	7.9	K5	08	01.128	0.10	4	70.809	- 52 23	45.14	0.17	4	70.809				15974
19465	-	51 12425	8.4	G0	08	20.027	0.11	5	71.529	- 50 52	20.67	0.09	5	71.529				2406
19466	+	4 4367	8.5	K2	08	25.219	--	1	69.538	+ 4 20	02.83	--	1	69.538				15976
19467	-	4 5042	7.8	K0	20 08	26.868	--	1	72.754	- 3 43	24.62	--	1	72.754				15977
19468	-	9 5382	6.45	B3	08	27.440	--	1	71.797	- 8 59	30.91	--	1	71.797	3618	27998	4458	15978
19469	-	24 15864	8.1	A3	08	29.421	0.14	5	71.411	- 24 22	34.71	0.24	5	71.411				15979
19470	-	67 3716	8.3	K2	08	34.681	0.15	4	69.736	- 67 24	18.48	0.32	4	69.736				20167
19471	+	0 4440	8.0	A0	08	37.491	--	1	71.565	+ 0 24	40.57	--	1	71.565				15980
19472	-	7 5198	8.1	G5	20 08	42.569	--	1	71.737	- 7 21	53.76	--	1	71.737				15981
19473	-	1 3911	3.37	A0	08	43.544	0.04	53	70.827	- 0 58	15.98	0.04	53	70.827	756	28010	4459	80756
19474	-	20 5844	8.5	G5	08	54.162	0.06	4	70.793	- 20 22	51.27	0.23	4	70.793				15982
19475	+	0 4441	8.4	K2	08	57.339	--	1	71.688	+ 0 55	08.00	--	1	71.688				15983
19476	-	12 5663	7.9	G5	09	01.043	0.30	2	71.498	- 12 13	34.35	0.22	2	71.498				15984
19477	-	50 12857	8.3	F0	20 09	01.487	0.07	4	70.868	- 50 27	41.45	0.30	4	70.868				2407
19478	-	57 9628	8.5	G0	09	05.525	0.11	3	71.212	- 57 37	43.41	0.18	3	71.212				15985
19479	-	29 16867	8.0	K2	09	06.470	0.10	4	70.591	- 29 42	11.55	0.15	4	70.591				15986
19480	-	36 13959	8.2	M1	09	09.196	0.12	4	69.999	- 35 55	59.31	0.23	4	69.999				15987
19481	+	3 4279	8.7	K2	09	17.061	0.01	2	71.722	+ 3 17	25.99	0.02	2	71.722				15988
19482	+	1 4227	8.1	K2	20 09	39.629	0.07	2	71.924	+ 2 09	24.58	0.07	2	71.924				15989
19483	-	48 13463	9.0	K0	09	40.290	0.16	4	70.765	- 48 28	52.61	0.12	4	70.765				2408
19484	-	23 16058	8.0	A0	09	42.268	0.08	4	70.503	- 23 35	28.72	0.09	4	70.503				15990
19485	-	25 14616	8.4	K2	09	47.481	0.14	4	70.307	- 24 57	19.18	0.07	4	70.307				15991
19486	-	10 5308	8.9	A5	09	50.479	--	1	71.682	- 9 51	16.35	--	1	71.682				15992
19487	-	86 379	7.6	K0	20 09	53.060	0.21	4	70.910	- 86 15	45.82	0.24	4	70.910				20168
19487	SP				09	52.830	0.16	4	69.606	- 86 15	45.52	0.25	4	69.606				20168
19488	-	26 14860	8.6	K2	09	54.476	0.12	4	70.254	- 26 20	30.10	0.41	4	70.254				15993
19489	-	63 4571	6.20	F0	10	00.962	0.07	6	69.321	- 63 34	04.62	0.08	6	69.321	3619	28048		33619
19490	-	38 13917	9.1	G5	10	08.071	0.18	6	71.359	- 38 30	28.24	0.07	6	71.359				15994
19491	-	35 13996	9.1	G5	20 10	11.376	0.13	4	71.082	- 35 31	41.77	0.05	4	71.082				15995
19492	-	6 5407	8.9	K0	10	13.483	0.12	2	72.010	- 5 59	23.70	0.02	2	72.010				15996
19493	-	22 5366	8.7	F0	10	20.675	0.22	5	71.244	- 22 12	39.90	0.19	5	71.244				15997
19494	-	64 4036	8.1	K0	10	21.402	0.14	4	69.483	- 64 20	37.23	0.12	4	69.483				20169
19495	-	68 3362	8.43	K5	10	33.444	0.08	4	69.412	- 68 35	06.06	0.20	4	69.412		28065		20170
19496	-	44 13819	8.37	F8	20 10	37.987	0.07	4	70.551	- 44 19	30.14	0.08	4	70.551		28067		2409
19497	-	35 14004	9.0	K5	10	47.554	0.16	4	70.596	- 34 50	38.39	0.05	4	70.596				15998
19498	-	36 13984	8.9	K0	10	49.037	0.11	4	70.912	- 36 46	01.61	0.19	4	70.912				15999
19499	-	1 3921	8.2	K0	10	55.087	0.00	2	70.520	- 1 21	47.15	0.41	2	70.520				16000
19500	-	43 13873	8.8	K0	10	56.836	0.10	4	71.388	- 43 12	20.18	0.19	4	71.388				2410
19501	-	14 5674	8.6	K2	20 10	56.842	0.09	2	71.021	- 14 20	53.90	0.14	2	71.021				16001
19502	-	60 7388	8.9	K5	11	05.117	0.16	4	69.994	- 60 44	42.80	0.26	5	70.272				16002
19503	-	17 5906	8.6	F5	11	08.318	0.02	2	70.059	- 16 49	15.31	0.06	2	70.059				16003
19504	-	13 5616	9.0	K0	11	24.031	0.19	2	72.004	- 13 38	30.22	0.23	2	72.004				16004
19505	-	5 5190	8.5	F8	11	26.753	0.34	2	71.963	- 4 59	25.15	0.05	2	71.963				16005
19506	-	72 2505	8.0	K0	20 11	28.797	0.14	5	71.178	- 72 20	18.06	0.21	5	71.178				20171
19507	-	18 5626	7.7	G5	11	35.729	0.16	2	70.999	- 18 14	48.92	0.39	2	70.999				16006
19508	-	0 3949	8.3	A5	11	46.200	0.17	2	71.515	- 0 00	30.19	0.11	2	71.515		28093		16007
19509	-	19 5753	7.8	K5	11	49.450	0.11	2	71.691	- 19 21	36.23	0.20	2	71.691		28095		16008
19510	+	14 4227	4.96	A0	11	57.819	0.03	83	70.959	+ 15 02	39.79	0.04	80	70.929	1526	28097	4470	81526

19461 9.0m to 10.2m.

CATALOG OF 23,001 STARS FOR 1950.0

505

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
19511	-71	2548	8.7	K0	20 12 01.701	0.26	4	71.292	-71 13 17.34	0.15	4	71.292				20172
19512	-17	5910	8.6	K0	12 02.834	0.19	2	72.183	-16 54 13.66	0.14	2	72.183				16009
19513	-11	5269	7.51	K0	12 03.850	0.01	2	71.922	-11 02 36.24	0.13	2	71.922	28100			16010
19514	-40	13754	8.6	G5	12 08.754	0.09	4	70.484	-40 11 07.51	0.14	4	70.484				2411
19515	-27	14659	5.69	K0	12 12.174	0.07	4	69.019	-27 11 05.38	0.11	4	69.019	28104			16011
19516	-58	7732	8.8	G5	20 12 13.732	0.12	4	70.331	-58 12 53.05	0.11	4	70.331				16012
19517	-1	3933	8.5	K0	12 16.746	0.22	2	72.486	-1 17 42.67	0.46	2	72.486				16013
19518	-42	14767	9.0	G5	12 16.944	0.14	5	70.741	-42 29 11.23	0.12	5	70.741				2412
19519	-46	13464	9.0	K5	12 17.290	0.07	4	71.001	-46 34 06.93	0.23	4	71.001				2413
19520	-81	888	8.7	G	12 19.420	0.20	4	70.516	-81 46 15.54	0.23	4	70.516				20173
19520 SP					20 12 19.301	0.05	4	69.076	-81 46 15.30	0.36	4	69.076				20173
19521	-28	16524	8.3	K0	12 21.673	0.14	4	69.159	-28 38 02.26	0.14	4	69.159				16014
19522	+2	4121	7.7	K0	12 22.858	0.01	2	72.176	+3 15 12.33	0.18	2	72.176	28115			16015
19523	-3	4825	6.61	F0	12 33.461	--	1	71.641	-3 39 23.02	--	1	71.641	28121			16016
19524	+1	4236	8.0	K0	12 34.909	--	1	70.622	+2 08 44.37	--	1	70.622				16017
19525	-30	17773	6.38	K2	20 12 44.496	0.11	6	69.351	-30 09 33.41	0.22	6	69.351	3621	28127	4473	33621
19526	-3	4828	8.5	K4	12 45.827	0.09	2	71.675	-2 53 00.32	0.06	2	71.675				16018
19527	-31	17434	8.8	K5	12 46.061	0.08	4	70.648	-30 50 29.54	0.23	4	70.648				16019
19528	-60	7392	7.86	K0	12 46.710	0.11	4	70.858	-59 47 50.24	0.13	4	70.858	28128			16020
19529	-7	5229	6.74	A2	12 47.181	0.30	2	72.146	-7 41 06.56	0.16	2	72.146	28129	4474		16021
19530	-73	2121	6.57	K2	20 12 51.036	0.09	6	68.997	-73 08 03.93	0.17	6	68.997	3622	28131		33622
19530 SP					12 51.031	0.08	40	71.318	-73 08 04.23	0.11	38	71.330	3622	28131		53622
19531	-33	14819	9.0	F5	12 51.849	0.10	4	70.523	-33 24 36.99	0.23	4	70.523				16022
19532	-76	1405	8.3	K0	12 52.555	0.09	4	69.996	-75 49 39.34	0.10	4	69.996				20174
19532 SP					12 52.608	0.26	4	69.559	-75 49 39.49	0.24	4	69.559				20174
19533	-61	6472	8.7	K2	20 12 55.147	0.05	4	70.278	-61 04 30.01	0.01	4	70.278				16023
19534	-63	4572	8.4	K2	12 55.577	0.22	4	70.365	-63 06 52.75	0.24	4	70.365				16024
19535	-2	5213	7.9	A0	13 06.721	0.01	2	71.021	-2 43 06.87	0.15	2	71.021	28138			16025
19536	-12	5679	8.7	K0	13 09.801	0.15	2	72.015	-11 51 01.34	0.09	2	72.015				16026
19537	-16	5545	7.23	A2	13 12.630	0.04	2	71.560	-16 26 59.00	0.05	2	71.560	28142			16027
19538	-24	15922	8.4	K0	20 13 12.924	0.03	4	70.005	-23 59 20.84	0.08	4	70.005				16028
19539	+4	4393	8.7	F2	13 13.107	0.18	2	71.982	+4 30 27.63	0.02	2	71.982				16029
19540	-35	14020	6.60	F2	13 13.338	0.10	4	70.847	-35 21 12.33	0.16	4	70.847	28143			16030
19541	-70	2778	8.8	K0	13 16.958	0.11	4	70.768	-70 41 16.40	0.28	4	70.768				20175
19542	-40	13772	8.8	K0	13 18.218	0.20	4	70.383	-39 47 21.66	0.18	4	70.383				16031
19543	-67	3723	8.7	K2	20 13 25.694	0.11	4	69.729	-67 33 41.32	0.08	4	69.729				20176
19544	-10	5333	8.2	K5	13 27.105	0.18	2	70.594	-9 44 25.52	0.56	2	70.594				16032
19545	-37	13637	8.8	F5	13 29.577	0.18	4	70.119	-37 42 42.15	0.12	4	70.119				16033
19546	+4	4395	6.57	G5	13 36.674	0.13	4	72.347	+4 25 35.94	0.17	4	72.347	3623	28148	4477	16034
19547	-12	5680	6.41	B9	13 36.793	0.21	2	70.020	-12 29 30.03	0.33	2	70.020	28149			16035
19548*	-32	15843	7.46	G5	20 13 45.278	0.19	4	71.280	-32 45 46.16	0.12	4	71.280				16036
19549	-21	5669	9.0	F2	13 52.385	0.13	4	70.848	-21 05 18.30	0.10	4	70.848	28154			16037
19550	-31	17449	7.88	K0	13 52.489	0.07	4	70.116	-31 21 45.69	0.18	4	70.116	28158			16038
19551	-50	12896	8.5	K2	13 54.721	0.09	6	71.570	-50 42 51.27	0.19	5	71.607				2414
19552	-15	5606	8.1	K0	13 56.975	0.30	2	71.714	-15 20 10.75	0.13	2	71.714				16039
19553	-45	13709	8.5	K0	20 14 10.491	0.14	4	70.697	-45 23 03.36	0.09	4	70.697				2415
19554	-7	5237	8.5	K2	14 12.639	0.08	2	72.221	-6 59 34.65	0.43	2	72.221				16040
19555	+0	4464	8.8	K5	14 13.269	0.14	2	72.206	+1 01 25.31	0.02	2	72.206				16041
19556	-20	5880	7.8	K0	14 21.749	0.07	4	70.317	-20 06 57.56	0.18	4	70.317				16042
19557	-1	3938	8.0	A0	14 23.222	--	1	71.696	-1 22 01.36	--	1	71.696				16043
19558	-54	9660	8.4	K5	20 14 27.361	0.12	5	71.084	-54 19 05.61	0.17	4	70.500				16044
19559	-49	13058	8.0	K0	14 33.370	0.19	4	70.948	-48 59 10.06	0.11	4	70.948				2416
19560	-51	12473	7.77	A0	14 36.802	0.12	4	70.338	-51 14 34.19	0.19	4	70.338	28181			2417
19561	+24	4075	5.45	K0	14 38.644	0.06	24	70.958	+24 30 57.06	0.10	24	70.958	760	28183	4480	30760
19562	-62	6154	8.87	K0	14 41.169	0.14	3	70.617	-62 03 32.86	0.26	3	70.617	28186			16045
19563	-12	5683	4.55	G0p	20 14 52.683	0.07	22	71.221	-12 39 51.03	0.05	22	71.221	1527	28189	4482	31527
19564	-55	9362	8.9	F5	14 56.711	0.10	3	70.701	-55 13 24.60	0.07	3	70.701				16046
19565	-41	13957	8.4	K2	15 02.432	0.29	3	70.259	-41 03 42.87	0.09	3	70.259				2418
19566	-22	5384	5.96	K0	15 05.317	0.03	67	70.984	-21 57 57.67	0.04	63	70.935	1529	28195	4484	81529
19567	-89	47	5.48	F0	15 06.380	0.06	30	71.110	-89 08 18.26	0.08	29	71.132	923	28194	4483	30923
19567 SP					20 15 06.010	0.03	45	71.115	-89 08 18.36	0.06	42	71.093	923	28194	4483	50923
19568	-39	13732	8.5	K2	15 08.131	0.18	3	70.569	-39 05 12.72	0.14	3	70.569				16048
19569	-48	13507	8.5	F5	15 08.614	0.19	3	70.567	-48 44 40.31	0.12	3	70.567				2419
19570	-56	9460	8.7	K0	15 13.752	0.30	3	71.086	-56 29 39.31	0.17	3	71.086				16049
19571	-8	5305	7.39	K0	15 14.988	--	1	72.362	-8 13 19.26	--	1	72.362	28199			16050
19572	-12	5685	3.77	G5	20 15 16.964	0.16	3	71.250	-12 42 04.73	0.06	3	71.250	761	28200	4485	30761
19573	-38	13964	8.6	M0	15 19.638	0.08	3	70.546	-38 14 55.06	0.14	3	70.546				16051
19574	-48	13509	6.28	M0	15 21.266	0.05	45	70.909	-47 52 03.37	0.04	45	70.909	1528	28202	4486	31528
19575	-74	1890	7.78	K2	15 27.853	0.03	4	70.514	-74 08 07.83	0.04	4	70.514				20177
19576	-44	13869	7.64	K0	15 28.304	0.17	4	70.921	-44 40 52.91	0.06	4	70.921				2420
19577	-5	5216	7.35	F8	20 15 31.623	0.21	2	72.580	-4 53 06.08	0.11	2	72.580	28209			16053
19578	-53	9849	9.1	K2	15 32.417	0.10	4	71.656	-53 08 41.87	0.27	3	71.643				16054
19579	-35	14046	9.2	G5	15 33.572	0.29	3	70.678	-35 02 22.24	0.17	3	70.678				16055
19580	-42	14796	9.0	G5	15 42.163	0.08	4	71.645	-42 26 37.20	0.04	4	71.645				2421
19581	-27	14703	8.0	K0	15 45.077	0.12	4	69.515	-27 13 57.35	0.07	4	69.515				16056

19548 SDS, 8.2m-8.4m, 270, 300°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _y	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
19582	-73	2131	8.7	K2	20 15 51.593	0.06	4	69.568	-73 38 37.25	0.15	4	69.568				20178
19583	-29	16959	8.9	K5	15 55.766	0.09	3	70.375	-29 06 09.18	0.32	3	70.375				16057
19584	-24	15958	7.5	K2	15 56.350	0.17	3	70.672	-24 03 04.73	0.13	3	70.672				16058
19585	+0	4475	6.92	A3	16 04.116	0.13	4	71.344	+0 29 02.85	0.17	4	71.344	3624	28220		16059
19586	-30	17820	8.5	K2	16 13.164	0.09	4	71.062	-30 22 00.47	0.19	4	71.062				16060
19587	-22	5389	8.6	K0	20 16 15.482	0.11	4	70.816	-22 17 06.21	0.16	4	70.816				16061
19588	-41	13971	8.2	K0	16 18.472	0.06	3	70.601	-40 48 18.40	0.05	3	70.601				2422
19589	-32	15878	8.1	K2	16 18.542	0.11	4	71.312	-32 26 38.01	0.18	4	71.312				16062
19590	-52	11668	8.5	K0	16 21.108	0.06	4	70.059	-51 48 57.65	0.21	4	70.059				16063
19591	-47	13343	9.0	G0	16 28.681	0.05	4	71.003	-46 53 40.73	0.15	4	71.003				2423
19592	+1	4255	7.7	F0	20 16 28.980	0.05	2	72.202	+2 04 33.81	0.15	2	72.202				16064
19593	-19	5776	5.46	K0	16 30.627	0.06	6	69.583	-19 16 33.76	0.10	6	69.583	3625	28233	4490	33625
19594	+2	4127	8.6	K5	16 30.669	--	1	71.603	+3 03 19.16	--	1	71.603				16065
19595	-20	5889	8.1	K0	16 39.414	0.08	4	70.056	-20 04 13.39	0.15	4	70.056				16066
19596	-55	9365	6.16	K5	16 39.591	0.09	6	68.981	-55 12 32.07	0.10	6	68.981	3626	28241	4491	33626
19597	-4	5090	8.4	F5	20 16 42.038	--	1	71.737	-3 54 42.54	--	1	71.737				16067
19598	-17	5936	8.4	K0	16 51.868	--	1	71.606	-17 38 45.62	--	1	71.606				16068
19599	-13	5637	8.5	K5	16 58.297	--	1	70.743	-13 36 37.79	--	1	70.743				16069
19600	+1	4261	8.0	G5	17 07.627	0.17	2	71.757	+1 50 07.12	0.16	2	71.757				16070
19601	-29	16977	8.0	K0	17 10.220	0.14	4	70.442	-29 17 22.07	0.16	4	70.442				16071
19602	-33	14859	8.43	K0	20 17 10.859	0.14	4	70.320	-33 07 04.17	0.03	4	70.320		28259		16072
19603	-2	5240	8.0	A0	17 16.656	0.06	2	71.698	-2 24 21.14	0.04	2	71.698		28262		16073
19604	-31	17501	8.6	K2	17 22.574	0.10	5	71.208	-31 09 29.33	0.22	5	71.208				16074
19605	-45	13741	7.31	F5	17 24.065	0.24	4	71.318	-45 42 13.61	0.09	4	71.318		28270		2424
19606	-38	13988	9.0	K0	17 33.030	0.06	4	70.914	-37 51 22.06	0.05	4	70.914				16075
19607	-10	5351	8.7	A5	20 17 35.213	--	1	70.641	-10 32 01.38	--	1	70.641				16076
19608	-36	14057	6.51	K2	17 38.519	0.04	58	71.479	-35 49 58.12	0.04	57	71.444	1530	28274	4493	31530
19609	-26	14942	8.0	K0	17 39.911	0.08	4	69.634	-26 18 27.67	0.06	4	69.634				16077
19610	-25	14710	7.82	K2	17 45.907	0.24	4	69.150	-24 57 25.23	0.13	4	69.150		28277		16078
19611	-6	5451	6.66	K5	17 46.332	0.03	6	69.807	-6 31 11.20	0.06	6	69.807	3628	28278	4494	33628
19612	+3	4319	8.5	A3	20 17 56.493	0.07	2	71.940	+3 49 29.33	0.02	2	71.940				16079
19613	+14	4263	6.34	G5	18 00.930	0.08	6	70.269	+14 24 37.35	0.12	6	70.269	3629	28288	4495	33629
19614	-69	3111	9.0	K0	18 01.193	0.12	5	71.183	-69 35 18.98	0.29	5	71.183				20179
19615	-5	5233	8.7	K0	18 02.677	0.07	2	72.154	-5 41 33.44	0.05	2	72.154				16080
19616	-50	12929	6.40	F8	18 02.923	0.16	3	70.885	-50 09 25.22	0.15	3	70.885	3630	28291	4496	33630
19617	-45	13747	8.9	F0	20 18 06.107	0.10	5	71.780	-45 08 45.89	0.24	4	71.371				2425
19618	-18	5653	7.18	K0	18 09.171	0.16	2	72.169	-18 28 59.39	0.15	2	72.169		28293		16081
19619	-15	5628	8.0	K0	18 10.306	--	1	71.598	-15 35 16.21	--	1	71.598			4497	16082
19620	-15	5629	3.25	*	18 12.268	0.05	26	71.511	-14 56 26.53	0.06	26	71.511	762	28295	4498	30762
19621	-11	5305	6.82	K0	18 16.634	0.24	2	72.173	-11 08 31.78	0.05	2	72.173		28296		16083
19622	+12	4297	8.8	A5	20 18 18.513	0.09	5	70.123	+12 39 31.89	0.24	4	70.039				27866
19623	-0	3977	8.9	F0	18 23.482	--	1	71.644	-0 03 55.49	--	1	71.644				16084
19624*	-56	9470	8.3	K2	18 24.358	0.10	4	70.179	-56 39 39.38	0.11	4	70.179				16085
19625	-34	14309	8.2	F2	18 25.990	0.08	5	71.549	-34 38 14.89	0.24	5	71.549				16086
19626	-36	14067	8.4	M0	18 28.223	0.11	5	70.926	-36 37 51.67	0.12	5	70.926				16087
19627	-23	16172	7.6	K0	20 18 32.337	0.25	5	70.445	-23 38 09.15	0.12	5	70.445				16088
19628	-66	3484	8.9	K5	18 33.387	0.16	4	69.614	-66 04 30.35	0.21	4	69.614				20180
19629	-21	5694	8.2	F5	18 37.758	0.10	4	69.824	-21 34 39.86	0.17	4	69.824				16089
19630	-10	5359	7.5	A0	18 46.017	0.06	2	69.990	-10 18 14.47	0.19	2	69.990				16090
19631	-2	5256	8.8	A5	18 48.347	--	1	71.603	-2 10 21.90	--	1	71.603				16092
19632	-54	9673	7.67	K0	20 18 48.428	0.07	4	69.433	-54 25 25.72	0.06	4	69.433		28305		16091
19633	-49	13082	7.55	K0	18 59.756	0.12	3	70.309	-49 01 33.30	0.03	3	70.309		28308		2426
19634	-42	14836	5.64	A0	19 04.230	0.05	38	70.779	-42 12 33.65	0.04	38	70.779	763	28309	4500	30763
19635	-7	5269	8.2	F0	19 14.093	--	1	71.508	-6 43 37.16	--	1	71.508		28313		16093
19636	-57	9666	9.3	G8	19 22.930	0.18	4	70.656	-57 17 33.81	0.31	4	70.656				16094
19637	-20	5913	8.5	G0	20 19 34.116	0.06	2	72.168	-19 56 30.25	0.01	2	72.168				16095
19638	-4	5108	8.5	K2	19 36.308	0.27	2	72.083	-3 47 43.63	--	1	70.745				16096
19639	-65	3849	8.6	K5	19 37.590	0.19	4	71.361	-65 44 31.33	0.21	4	71.361				20181
19640	-59	7611	8.7	M0	19 39.212	0.08	4	70.094	-59 30 09.73	0.23	4	70.094				16097
19641	-61	6481	8.0	K2	19 41.759	0.04	4	70.142	-60 46 15.36	0.19	4	70.142				16098
19642	-16	5581	8.5	K0	20 19 43.152	0.20	2	71.497	-16 40 54.68	0.13	2	71.497				16099
19643	-35	14080	7.02	F2	19 47.655	0.37	4	70.561	-35 32 18.09	0.10	4	70.561		28321		16100
19644	-61	6482	9.1	K2	19 48.067	0.07	4	70.984	-61 28 11.25	0.19	4	70.984				16101
19645	-12	5704	8.4	K0	19 49.872	0.25	2	71.543	-12 32 34.61	0.42	2	71.543		28322		16102
19646	+4	4430	8.6	F8	19 50.246	--	1	71.617	+4 46 33.37	--	1	71.617				16103
19647	-64	4044	8.2	A2	20 19 50.683	0.24	4	71.006	-64 03 07.00	0.04	4	71.006				16104
19648	-9	5444	8.3	A0	19 52.660	0.01	2	71.491	-9 10 31.64	0.29	2	71.491				16105
19649	-78	1308	8.6	A2	19 53.071	0.22	4	70.477	-78 21 26.60	0.23	4	70.477				20182
19649 SP					19 53.027	0.06	4	70.309	-78 21 26.95	0.40	4	70.309				20182
19650	-51	12515	8.2	K0	20 07.558	0.18	5	71.110	-50 59 57.83	0.17	5	71.110				2427
19651	-79	1088	8.33	K2	20 20 12.076	0.11	4	70.259	-79 33 24.12	0.12	4	70.259		28328		20183
19651 SP					20 12.108	0.06	4	70.026	-79 33 23.93	0.40	4	70.026		28328		20183
19652	-79	1089	8.20	F8	20 17.294	0.21	4	70.498	-78 55 09.27	0.15	4	70.498		28331		20184
19652 SP					20 17.391	0.19	4	70.594	-78 55 09.31	0.22	4	70.594		28331		20184
19653	-10	5369	6.34	G5	20 17.617	0.06	7	70.082	-9 48 57.21	0.14	6	70.019	3632	28332		33632

19620 G0+A0.

19624 9.6m-9.6m. 0°2.

CATALOG OF 23,001 STARS FOR 1950.0

507

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
19654	-6	5462	8.2	A2	20 20 20.227	0.02	2	72.191	-5 50 12.86	0.11	2	72.191		28334		16106
19655	-72	2516	8.6	G5	20 22.032	0.17	4	71.212	-72 44 52.95	0.24	4	71.212				20185
19656	+2	4148	8.6	K5	20 25.727	0.09	2	71.710	+3 13 35.72	0.13	2	71.710				16107
19657	-11	5313	8.7	K0	20 27.734	0.05	2	71.991	-11 02 41.04	0.32	2	71.991				16108
19658	-53	9860	9.0	K0	20 28.951	0.34	3	70.324	-53 11 50.00	0.18	3	70.324				16109
19659	-35	14086	7.41	K0	20 32.511	0.06	4	70.520	-35 17 28.20	0.03	4	70.520		28344		16110
19660	-36	14097	8.2	K0	20 36.952	0.15	4	70.776	-36 30 09.62	0.08	4	70.776				16111
19661	-14	5732	6.70	B9	20 38.581	0.55	2	72.034	-14 25 05.00	0.43	2	72.034		28349		16112
19662	+4	4434	5.41	K0	20 41.972	0.05	26	71.530	+5 10 54.08	0.06	26	71.530	1531	28351	4506	31531
19663	-48	13546	8.5	G5	20 58.094	0.11	4	70.876	-48 28 35.79	0.14	4	70.876				2428
19664	-50	12952	8.5	M1	20 59.117	0.08	4	70.503	-50 03 19.63	0.17	4	70.503				2429
19665	-56	9480	8.0	K0	21 02.106	0.10	4	70.151	-56 06 08.60	0.22	4	70.151				16113
19666	-42	14855	7.99	K2	21 03.051	0.10	4	70.998	-41 49 53.28	0.14	4	70.998		28361		2430
19667	-27	14775	8.5	G0	21 03.623	0.05	4	70.350	-27 44 11.74	0.27	4	70.350				16114
19668	-28	16637	8.6	F5	21 06.521	0.11	4	70.030	-28 10 02.18	0.09	4	70.030				16115
19669	-43	13965	9.0	G5	20 21 11.237	0.11	4	70.499	-43 18 14.39	0.04	4	70.499				2431
19670	-8	5343	8.1	K2	21 13.188	--	1	71.505	-7 45 31.19	--	1	71.505				16116
19671	-58	7747	8.5	K2	21 14.031	0.06	4	70.776	-58 15 23.94	0.11	4	70.776				16117
19672	+0	4491	8.5	K0	21 19.458	0.07	2	70.523	+0 21 36.72	0.12	2	70.523				16118
19673	-22	5419	8.5	F5	21 25.430	0.06	4	70.553	-22 12 42.72	0.10	3	69.597				16119
19674	-52	11685	9.0	F5	20 21 33.848	0.15	4	71.371	-52 29 57.00	0.08	4	71.371				16120
19675	-1	3971	7.9	K0	21 34.680	0.27	2	72.003	-0 43 46.99	0.02	2	72.003			4509	16121
19676	-57	9674	2.12	B3	21 42.282	0.04	44	70.905	-56 53 51.92	0.06	42	70.856	764	28374	4510	30764
19677	-24	16022	8.7	A0	21 44.628	0.09	3	70.580	-24 25 06.34	0.10	3	70.580				16122
19678	-74	1906	7.95	K0	21 46.818	0.15	4	69.860	-74 26 57.31	0.20	4	69.860		28376		20186
19679	-83	696	9.1	K0	20 21 52.425	0.20	5	71.345	-83 35 51.62	0.30	5	71.345				20187
19679 SP	-5	5262	8.2	K0	21 52.499	0.04	4	70.135	-83 35 51.42	0.22	4	70.135				20187
19680	-1	3976	8.07	K0	22 02.871	--	1	72.463	-4 44 50.89	--	1	72.463				16123
19681	-1	3976	8.07	K0	22 06.359	--	1	71.759	-1 42 15.83	--	1	71.759		28384		16124
19682	+0	4496	6.81	K5	22 09.179	--	1	71.699	+1 12 20.20	--	1	71.699		28386	4511	16125
19683	-39	13786	8.5	K5	20 22 13.644	0.11	5	70.914	-39 29 34.64	0.15	5	70.914				16126
19684	-30	17891	7.48	M3	22 15.762	0.24	3	70.553	-30 08 52.94	0.14	3	70.553		28390		16127
19685	-34	14354	9.1	G0	22 18.483	0.14	4	70.131	-34 28 23.65	0.05	4	70.131				16128
19686	-12	5721	7.37	A5	22 22.980	0.25	2	72.592	-11 52 04.65	0.02	2	72.592		28393		16129
19687	-29	17049	5.97	K0	22 23.351	0.03	78	71.270	-28 49 36.77	0.03	77	71.264	1532	28394	4513	81532
19688	-29	17050	8.1	K0	20 22 29.689	0.06	3	70.585	-29 36 06.37	0.17	3	70.585				16130
19689	-21	5716	8.8	K2	22 32.965	0.12	3	70.714	-21 19 15.40	0.12	3	70.714				16131
19690	+3	4336	7.8	K0	22 42.945	--	1	71.669	+3 49 30.09	--	1	71.669				16132
19691	-10	5386	8.7	K2	22 43.358	--	1	71.652	-10 35 28.95	--	1	71.652				16133
19692	-46	13546	9.0	G0	22 55.880	0.06	4	70.529	-46 13 02.15	0.13	4	70.529				2432
19693	-59	7615	8.5	K2	20 22 58.394	0.07	4	70.696	-59 23 55.31	0.29	4	70.696				16134
19694	-37	13738	8.6	M1	23 11.388	0.22	4	70.755	-37 16 24.84	0.13	4	70.755				16135
19695	-77	1438	9.1	F2	23 14.433	0.12	4	70.413	-76 53 19.37	0.14	4	70.413				20188
19695 SP	-15	5663	7.8	K2	23 14.396	0.14	4	70.281	-76 53 19.73	0.19	4	70.281				20188
19696	-33	14923	8.7	G5	23 16.132	0.04	2	70.570	-15 08 39.76	0.09	2	70.570				16136
19697	-42	14882	7.67	A2	20 23 16.915	0.13	4	70.992	-33 28 14.50	0.13	4	70.992				16137
19698	-80	957	7.55	F0	23 17.445	0.12	4	70.594	-42 13 12.48	0.19	4	70.594		28411		2433
19699	-80	957	7.55	F0	23 18.780	0.11	4	70.309	-80 42 38.47	0.05	4	70.309		28413		20189
19699 SP	-8	5359	8.6	K2	23 18.937	0.10	5	70.537	-80 42 38.18	0.33	4	70.648		28413		20189
19700	-41	14034	8.5	K0	23 19.788	--	1	71.688	-7 53 56.22	--	1	71.688				16138
19701	-4	5124	7.6	F5	20 23 23.533	0.05	4	71.335	-40 52 39.22	0.12	4	71.335				2434
19702	-45	13809	8.5	K2	23 24.665	0.03	2	72.183	-4 01 44.58	0.28	2	72.183		28416		16139
19703	-40	13864	9.0	K2	23 25.364	0.21	4	70.305	-45 45 29.69	0.13	4	70.305				2435
19704	+20	4559	5.80	K0	23 26.537	0.12	3	70.932	-40 34 40.21	0.20	4	71.103				2436
19705	-19	5813	7.64	F5	23 27.799	0.14	6	69.589	+21 14 43.83	0.10	6	69.589	3634	28418		33634
19706	-14	5742	7.9	K2	20 23 29.373	0.09	2	72.434	-19 18 59.97	0.04	2	72.434		28420		16140
19707	+3	4339	8.6	A3	23 29.697	--	1	72.476	-13 42 55.68	--	1	72.476				16141
19708	+2	4164	6.64	G5	23 34.709	0.04	2	72.579	+4 01 25.39	--	1	71.737				16142
19709	-69	3118	8.9	A5	23 44.183	0.37	2	70.528	+2 47 33.17	0.16	2	70.528		28430		16143
19710	-50	12975	8.5	M1	24 01.693	0.11	4	70.428	-68 48 58.84	0.08	4	70.428				20190
19711	+16	4259	6.17	K0	20 24 03.688	0.13	4	71.318	-49 55 57.13	0.19	4	71.318				2437
19712	-25	14779	8.5	G5	24 06.060	0.09	6	69.429	+17 09 02.65	0.06	6	69.429	3635	28435	4515	33635
19713	-16	5604	8.5	G5	24 07.426	0.08	5	69.520	-24 47 27.96	0.25	5	69.520				16144
19714	+1	4289	8.4	K5	24 08.453	0.26	2	71.510	-16 04 24.53	--	1	70.641				16145
19715	-27	14808	8.5	K0	24 08.556	0.17	2	71.003	+1 45 04.27	0.19	2	71.003		28436		16146
19716	-49	13108	9.2	K0	20 24 23.520	0.34	5	70.509	-27 07 25.98	0.14	5	70.509				16147
19717	-32	15971	8.6	K0	24 25.360	0.14	4	71.425	-48 56 25.08	0.15	4	71.425				2438
19718	-47	13411	9.2	K0	24 25.770	0.13	4	70.781	-32 29 13.13	0.11	4	70.781				16148
19719	-65	3852	9.2	F8	24 29.136	0.15	5	70.630	-47 05 01.30	0.15	5	70.630				2439
19720	-26	15026	8.5	F2	24 32.198	0.21	4	69.601	-65 44 10.17	0.12	4	69.601				20191
19721	-55	9392	7.73	K0	20 24 34.409	0.07	4	70.365	-26 22 07.62	0.08	4	70.365				16149
19722	-31	17601	8.5	G5	24 34.881	0.16	4	69.849	-55 20 36.84	0.14	4	69.849		28443		16150
19723	-64	4046	8.8	M1	24 51.724	0.09	4	70.359	-31 24 44.75	0.15	4	70.359				16151
19724	-3	4901	8.5	K2	24 52.009	0.17	4	70.084	-64 33 39.51	0.23	4	70.084				20192
19725	-3	4901	8.5	K2	24 52.934	0.02	2	71.522	-3 33 40.30	0.24	2	71.522		28449		16152

19665 8.8m-8.8m, 0.72.

19723 SDS, 8.7m-10.7m, 1.79, 328°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
19726	-18	5686	9.0	K0	20 24 59.929	0.10	2	71.564	-18 13 15.21	0.10	2	71.564	3636	28451	4517	16153
19727	-26	15036	6.56	F8	25 01.634	0.08	6	69.634	-25 46 21.88	0.18	6	69.634				33636
19728	-29	17089	7.38	K0	25 01.857	0.12	4	69.553	-29 32 24.17	0.13	4	69.553				16154
19729	-81	901	5.81	K0	25 06.269	0.15	6	69.656	-81 08 00.69	0.11	6	69.656	3994	28453	4518	33994
19729	SP				25 06.049	0.17	6	68.966	-81 08 00.82	0.26	6	68.966	3994	28453	4518	53994
19730	-6	5487	7.1	M1	20 25 06.966	0.21	2	71.559	-5 49 12.52	0.24	2	71.559				16155
19731	-23	16259	7.5	K5	25 12.160	0.08	4	69.195	-23 10 49.79	0.04	4	69.195				16156
19732	-36	14161	7.8	K0	25 19.204	0.06	4	70.049	-36 21 38.64	0.13	4	70.049				16157
19733*	-51	12559	7.70	F0	25 23.478	0.11	4	70.124	-51 15 06.25	0.27	4	70.124		28460		2440
19734	-38	14052	8.3	K2	25 24.825	0.16	4	70.829	-38 40 08.23	0.15	4	70.829				16158
19735	-0	4010	8.5	K5	20 25 26.064	0.07	2	71.547	-0 19 03.50	0.12	2	71.547				16159
19736	-67	3738	9.1	A3	25 28.198	0.20	5	70.415	-67 11 04.21	0.36	5	70.415				20193
19737	-56	9499	9.2	K0	25 29.021	0.17	4	71.094	-56 39 48.50	0.30	4	71.094				16160
19738	-17	5987	8.4	K0	25 33.320	0.01	2	71.996	-17 29 59.47	0.13	2	71.996				16161
19739	-36	14166	6.22	A0	25 34.506	0.08	6	70.460	-35 45 44.83	0.15	6	70.460	3637	28464	4521	33637
19740	+7	4477	6.26	K0	20 25 41.538	0.09	7	70.133	+8 16 14.94	0.23	6	70.078	3638	28466	4522	33638
19741	-9	5473	7.08	G5	25 43.881	0.11	2	72.131	+9 32 13.82	0.08	2	72.131		28468	4524	16162
19742	-32	15987	9.2	K	25 44.968	0.07	4	70.503	-32 15 48.49	0.12	4	70.503				16163
19743	-20	5945	8.8	G5	25 45.853	0.13	2	72.165	-19 51 25.79	0.15	2	72.165				16164
19744	-24	16058	6.88	K0	25 46.525	0.17	4	70.368	-24 09 00.43	0.18	4	70.368			28471	16165
19745	-12	5738	7.38	K5	20 25 48.123	0.04	2	72.151	-11 57 46.03	0.10	2	72.151			28473	16166
19746	-54	9700	9.2	K2	25 48.859	0.09	4	70.828	-54 05 16.28	0.07	4	70.828				16167
19747	-48	13573	9.0	K0	25 57.002	0.10	4	70.025	-48 16 20.38	0.07	4	70.025				2441
19748	-11	5343	8.6	K2	26 00.163	0.28	2	70.495	-11 23 23.61	0.06	2	70.495				16168
19749	-77	1441	8.22	K0	26 00.516	0.21	5	70.819	-77 27 47.66	0.13	5	70.819			28480	20194
19749	SP				26 00.573	0.07	4	69.052	-77 27 47.72	0.21	4	69.052			28480	20194
19750	+0	4515	7.23	B8	26 02.956	0.10	2	70.594	+0 43 00.04	0.38	2	70.594			28483	16169
19751	-43	14018	9.3	G5	26 03.389	0.23	4	70.877	-43 06 25.58	0.03	4	70.877				2442
19752	-9	5477	8.9	K2	26 09.021	0.04	2	72.015	-8 46 37.20	0.01	2	72.015				16170
19753	-0	4015	8.9	F8	26 09.541	--	1	70.606	-0 16 47.52	--	1	70.606				16171
19754	-34	14410	8.4	K0	20 26 11.506	0.13	4	70.801	-34 16 43.08	0.03	4	70.801				16172
19755	-15	5683	9.2	K0	26 14.336	--	1	70.641	-15 13 39.06	--	1	70.641				16173
19756	-7	5307	8.4	K0	26 24.763	0.15	2	72.191	-7 11 05.13	--	1	71.658				16174
19757	-22	5442	6.22	K5	26 35.465	0.04	6	69.370	-22 33 32.10	0.09	6	69.370	3639	28496	4526	33639
19758	-23	16281	7.6	K0	26 41.403	0.17	4	69.853	-23 00 46.34	0.26	4	69.853				16175
19759	+3	4348	7.6	F8	20 26 41.953	--	1	71.669	+4 17 20.17	--	1	71.669				16176
19760	-13	5680	8.0	K0	26 44.232	--	1	71.674	-12 45 32.49	--	1	71.674				16177
19761	-82	815	9.2	G0	26 47.525	0.23	4	70.903	-82 27 39.22	0.04	4	70.903				20195
19761	SP				26 47.501	0.19	4	69.482	-82 27 39.41	0.24	4	69.482				20195
19762	+4	4460	8.8	A0	26 51.339	0.00	2	72.211	+4 25 14.62	0.18	2	72.211				16178
19763	-19	5829	8.8	F0	20 26 51.537	--	1	71.682	-19 15 31.20	--	1	71.682				16179
19764	-10	5405	8.4	G5	26 52.263	0.23	2	72.175	-10 10 11.44	0.19	2	72.175				16180
19765	-62	6163	8.2	K2	26 58.092	0.12	4	69.995	-62 25 02.48	0.12	4	69.995				16181
19766	-3	4918	5.11	K0	27 02.320	0.04	65	71.622	-3 03 11.72	0.04	64	71.594	1533	28504	4527	31533
19767	-4	5153	8.0	K5	27 03.018	0.17	2	71.559	-4 21 01.29	0.19	2	71.559				16182
19768	-53	9889	7.77	K2	20 27 04.410	0.20	5	70.841	-52 58 34.97	0.22	5	70.841			28506	16183
19769	-35	14164	9.3	K0	27 05.636	0.08	4	70.582	-35 31 23.77	0.10	4	70.582				16184
19770	+2	4179	7.6	A0	27 13.786	0.02	2	71.551	+2 49 42.07	0.07	2	71.551				16185
19771	-37	13772	8.9	G5	27 15.646	0.14	4	71.285	-37 12 12.49	0.17	4	71.285				16186
19772	-33	14972	8.9	K2	27 20.242	0.13	4	70.117	-33 19 26.13	0.16	4	70.117				16187
19773	-39	13833	8.8	K5	20 27 24.045	0.15	5	70.426	-39 26 39.44	0.07	5	70.426				16188
19774	-31	17633	8.6	K5	27 34.764	0.08	4	70.105	-31 27 23.47	0.12	4	70.105				16189
19775	-69	3122	8.8	K0	27 38.509	0.16	4	69.653	-68 46 04.70	0.12	4	69.653				20196
19776	-1	3988	8.2	K5	27 39.929	0.01	2	71.970	-1 20 28.95	0.20	2	71.970				16190
19777	-21	5738	7.12	K0	27 47.047	0.11	4	69.855	-20 52 41.90	0.09	4	69.855			28520	16191
19778	-17	6003	8.3	F5	20 27 49.924	0.22	2	72.012	-16 43 09.04	0.07	2	72.012				16192
19779	-71	2558	8.0	K2	27 50.783	0.14	4	69.912	-71 29 26.03	0.18	4	69.912				20197
19780	-60	7408	8.7	M0	27 54.352	0.22	4	70.412	-60 12 47.54	0.09	4	70.412				16193
19781	-5	5291	7.72	K2	27 55.383	0.12	2	72.145	-5 33 29.32	0.37	2	72.145			28526	16194
19782	-44	13995	8.0	K0	27 55.599	0.04	4	71.024	-44 32 50.19	0.14	4	71.024				2443
19783	-48	13592	9.0	G5	20 27 59.940	0.10	4	70.846	-48 10 39.24	0.10	4	70.846				2444
19784	-31	17640	8.9	K0	28 01.190	0.12	4	69.037	-30 52 39.07	0.27	4	69.037				16195
19785	-45	13865	8.4	K0	28 09.237	0.15	4	70.098	-44 54 56.78	0.02	4	70.098				2445
19786	-42	14938	9.0	K5	28 14.710	0.04	4	70.278	-42 11 04.18	0.15	4	70.278				2446
19787*	-15	5696	6.19	G0	28 16.224	0.25	2	71.944	-15 13 29.48	0.36	2	71.944			28533	16196
19788	-81	903	8.5	K2	20 28 16.989	0.13	4	70.430	-81 42 07.45	0.12	4	70.430				20198
19788	SP				28 17.181	0.18	4	70.045	-81 42 07.47	0.30	4	70.045				20198
19789	-66	3493	9.2	K5	28 19.189	0.18	4	70.045	-66 11 34.03	0.21	4	70.045				20199
19790	-50	13020	7.8	K0	28 21.412	0.23	4	70.099	-50 21 15.60	0.06	4	70.099				2447
19791	-3	4928	8.5	F8	28 30.281	0.06	2	70.520	-2 45 43.55	0.24	2	70.520				16197
19792	-57	9706	8.8	M1	20 28 44.940	0.09	4	70.108	-57 39 19.08	0.11	4	70.108				16198
19793	-46	13593	8.8	K5	28 53.525	0.20	4	70.610	-45 59 37.90	0.16	4	70.610				2448
19794	-47	13440	8.9	K0	29 05.416	0.14	5	70.248	-47 24 47.25	0.17	5	70.248				2449
19795	-14	5766	8.8	F5	29 05.864	--	1	72.340	-13 56 52.08	--	1	72.340				16199
19796	-38	14085	9.1	K5	29 06.705	0.18	4	70.551	-38 35 33.49	0.13	4	70.551				16200

19733 SDS, 8.0m-9.2m, 1"2, 283°.

19787 7.0m-7.0m, 0"1.

CATALOG OF 23,001 STARS FOR 1950.0

509

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
19797	-59	7619	8.1	K0	20 29 07.383	0.19	4	69.612	-58 48 43.29	0.28	4	69.612				16201
19798	-75	1636	8.9	M1	29 12.803	0.10	4	70.815	-75 20 16.81	0.16	4	70.815				20200
19798	SP				29 12.764	0.06	4	69.052	-75 20 16.85	0.49	4	69.052				20200
19799	-49	13139	8.5	K0	29 16.015	0.11	4	70.042	-48 56 27.76	0.12	4	70.042				2450
19800	-29	17138	8.4	K0	29 19.053	0.10	4	69.974	-28 46 19.40	0.21	4	69.974				16203
19801	-22	5458	8.38	F0	20 29 20.046	0.14	4	69.092	-22 19 55.57	0.11	4	69.092		28555		16204
19802	-25	14851	7.15	K2	29 20.520	0.08	4	69.905	-25 02 26.49	0.08	4	69.905		28557		16205
19803	-10	5423	5.82	G5	29 40.057	0.03	70	71.347	-10 01 28.87	0.04	69	71.360	1536	28563	4533	31536
19804	-44	14011	8.8	K2	29 42.250	0.25	4	70.595	-44 44 10.34	0.29	4	70.595				2451
19805	-43	14049	8.06	K5	29 44.429	0.14	4	70.889	-43 29 46.57	0.10	4	70.889		28567		2452
19806	-8	5387	8.3	K0	20 29 44.500	0.10	2	71.758	-8 22 00.17	0.01	2	71.758				16206
19807	+1	4309	7.51	K2	29 45.934	0.01	2	71.551	+2 02 59.02	0.21	2	71.551		28568		16207
19808	-53	9903	8.2	K0	29 53.913	0.10	4	69.729	-53 40 07.00	0.16	4	69.729				16208
19809	-71	2560	6.54	K0	29 57.584	0.15	6	70.740	-71 21 38.85	0.17	6	70.740	3642	28576		33642
19809	SP				29 57.619	0.05	62	71.582	-71 21 39.24	0.12	54	71.542	3642	28576		53642
19810	+3	4362	8.4	K5	20 30 00.770	0.14	2	72.082	+3 29 42.04	0.23	2	72.082				16209
19811	-64	4057	8.8	K0	30 06.070	0.11	4	70.416	-63 50 00.51	0.12	4	70.416				16210
19812	-19	5846	8.6	K5	30 10.658	--	1	71.379	-19 28 34.65	--	1	71.379				16211
19813	-16	5632	8.8	F2	30 15.759	0.01	2	71.492	-16 11 49.50	0.14	2	71.492				16212
19814	-41	14091	9.0	K5	30 19.631	0.14	4	70.294	-40 53 50.63	0.11	4	70.294				2453
19815	-2	5303	9.0	A0	20 30 27.572	--	1	71.502	-2 18 14.50	--	1	71.502				16213
19816	-44	14020	5.30	K0	30 29.330	0.11	6	70.411	-44 01 14.79	0.07	6	70.411	3643	28588	4537	33643
19817	-21	5752	8.9	A5	30 32.063	0.16	5	70.717	-21 04 05.81	0.37	5	70.717				16214
19818	+10	4321	3.98	B5	30 49.416	0.10	9	70.791	+11 07 55.23	0.13	9	70.791	768	28593	4539	30768
19819	-55	9418	8.6	M0	30 51.470	0.24	3	68.619	-55 40 06.74	0.05	3	68.619				16215
19820	-84	619	7.08	A0	20 31 01.440	0.02	237	71.091	-84 34 58.60	0.03	232	71.079	1668	28599	4540	61668
19820	SP				31 01.405	0.02	282	71.182	-84 34 58.65	0.03	269	71.164	1668	28599	4540	71668
19821	+0	4536	8.0	K0	31 04.390	0.18	2	71.684	+1 05 50.77	0.40	2	71.684				16216
19822	-10	5431	8.7	K0	31 11.659	0.23	2	72.169	-10 17 41.02	0.25	2	72.169				16217
19823	-62	6170	9.1	K2	31 14.371	0.17	4	69.612	-62 23 53.20	0.12	4	69.612				16218
19824	-14	5781	6.24	F8	20 31 24.851	0.17	5	72.242	-13 53 37.85	0.09	4	72.390	3645	28608		16219
19825	+4	4486	6.68	K0	31 30.559	0.02	90	71.081	+4 43 35.78	0.04	88	71.028	1537	28614	4543	81537
19826	-15	5717	8.2	K2	31 38.634	0.17	2	71.551	-15 05 05.36	0.08	2	71.551				16220
19827	-27	14896	7.5	K0	31 44.226	0.12	4	69.948	-27 24 14.06	0.11	4	69.948				16221
19828	-0	4043	7.9	K2	31 48.821	0.13	2	72.003	-0 39 04.25	0.22	2	72.003		28623		16222
19829	-36	14247	9.2	K2	20 31 49.273	0.07	4	70.106	-36 36 25.35	0.09	4	70.106				16223
19830	-67	3747	8.6	K2	31 50.832	0.14	4	70.149	-67 00 46.19	0.18	4	70.149				20201
19831	-6	5523	8.52	K0	31 53.877	0.11	2	71.973	-6 00 58.01	0.18	2	71.973		28627		16224
19832	-69	3127	6.82	K0	31 55.332	0.11	4	70.766	-69 37 27.69	0.19	4	70.766		28628		20202
19833	-60	7410	7.71	K2	32 01.259	0.13	4	69.895	-59 51 06.15	0.11	4	69.895		28632		16225
19834	-58	7762	8.6	K2	20 32 10.253	0.20	4	70.731	-57 57 33.70	0.11	4	70.731				16226
19835	-25	14883	8.5	G5	32 11.737	0.13	4	69.988	-25 39 14.54	0.12	4	69.988				16227
19836	-33	15036	9.2	K0	32 12.517	0.11	4	70.133	-33 39 52.10	0.12	4	70.133				16228
19837	-30	18018	9.0	K0	32 12.675	0.15	4	70.868	-30 37 39.18	0.08	4	70.868				16229
19838	-67	3748	7.9	M1	32 14.497	0.08	4	71.188	-67 35 35.97	0.11	4	71.188				20203
19839	-61	6493	8.0	K2	20 32 18.135	0.16	4	70.621	-61 35 05.38	0.25	4	70.621				16230
19840	-18	5713	8.9	G0	32 23.562	0.03	2	72.015	-18 26 30.87	0.01	2	72.015				16231
19841	-9	5507	8.4	A2	32 31.367	0.25	2	71.519	-9 10 36.27	0.20	2	71.519		28649		16232
19842	-28	16774	8.5	G0	32 31.513	0.22	4	70.087	-28 09 19.30	0.27	4	70.087				16233
19843	-23	16356	8.5	G5	32 31.870	0.03	4	69.824	-23 42 33.12	0.07	4	69.824				16234
19844	-40	13944	8.1	K0	20 32 31.918	0.08	5	70.399	-39 51 28.35	0.05	5	70.399				2454
19845	-51	12619	7.8	G5	32 33.707	0.01	4	71.075	-51 04 13.25	0.07	4	71.075				2455
19846	-11	5370	8.4	K2	32 34.931	0.26	2	71.535	-11 31 03.97	0.17	2	71.535				16236
19847	-17	6027	6.20	A5	32 42.712	0.16	2	72.172	-16 41 56.89	0.26	2	72.172		28652		16237
19848	-13	5709	8.4	K0	32 43.722	0.15	2	72.036	-13 09 03.68	0.25	2	72.036				16238
19849	-19	5861	8.8	K0	20 32 51.058	--	1	71.688	-19 15 33.65	--	1	71.688				16239
19850	-24	16134	7.6	K0	32 51.437	0.04	4	70.344	-24 32 49.67	0.09	4	70.344				16240
19851	-27	14911	7.03	F5	32 54.026	0.13	4	70.138	-26 56 50.43	0.22	4	70.138		28658		16241
19852	-5	5315	7.8	G5	33 01.671	0.10	2	72.224	-4 53 39.85	0.35	2	72.224				16242
19853	-3	4955	8.4	F2	33 05.804	0.14	2	72.272	-3 29 37.46	0.01	2	72.272				16243
19854	+3	4375	8.7	M5	20 33 08.444	--	1	71.748	+3 49 26.36	--	1	71.748				16244
19855	-37	13824	8.9	K0	33 09.033	0.17	4	71.034	-37 16 53.10	0.29	4	71.034				16245
19856	+2	4203	7.9	F8	33 12.267	--	1	71.732	+3 07 46.09	--	1	71.732		28666		16246
19857	-38	14127	8.8	M4	33 21.087	0.11	4	71.567	-38 11 59.02	0.11	4	71.567				16247
19858	-61	6495	5.03	F5	33 24.986	0.07	6	69.024	-61 42 14.76	0.14	6	69.024	3647	28668	4549	33647
19859	-23	16370	8.7	K0	20 33 27.954	0.07	4	70.499	-22 53 07.46	0.08	4	70.499				16248
19860	-70	2795	7.76	K0	33 32.398	0.20	3	70.018	-70 14 52.41	0.24	3	70.018		28673		20204
19861	-21	5768	7.29	K0	33 32.996	0.06	4	71.337	-20 45 34.55	0.11	3	70.642		28674		16249
19862	-53	9917	9.2	G5	33 37.365	0.09	3	69.991	-53 14 15.08	0.10	3	69.991				16250
19863	-32	16078	8.9	F5	33 38.361	0.07	3	70.389	-32 22 54.88	0.09	3	70.389				16251
19864	-58	7764	7.77	F5	20 33 59.028	0.10	3	70.640	-58 02 57.70	0.25	3	70.640		28678		16252
19865	-0	4052	8.8	K2	34 00.182	--	1	71.644	+0 06 54.26	--	1	71.644				16253
19866	-47	13477	3.21	K0	34 03.626	0.06	21	70.968	-47 28 01.54	0.05	21	70.968	769	28682	4550	30769
19867	-31	17724	8.9	K0	34 03.627	0.03	3	70.624	-31 24 33.33	0.14	3	70.624				16254
19868	-3	4961	5.22	K5	34 07.428	0.06	6	70.138	-2 43 28.01	0.12	6	70.138	3648	28684		33648

19803 A 13960, 10.0m, 3'2, 23°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
19869	-34	14501	8.7	K0	20 34 08.198	0.07	3	70.664	-34 41 08.16	0.11	3	70.664				16255
19870	+1	4327	7.6	K0	34 11.079	--	1	71.726	+2 19 16.20	--	1	71.726	28687			16256
19871	-61	6498	8.4	K2	34 19.298	0.33	4	71.150	-60 47 08.70	0.05	4	71.150				16257
19872	-55	9438	9.1	K2	34 24.507	0.17	2	69.994	-55 18 29.01	0.10	2	69.994				16258
19873	-85	505	8.9	K2	34 35.330	0.14	4	70.308	-85 15 43.53	0.11	4	70.308				20205
19873	SP				20 34 35.058	0.17	4	69.554	-85 15 43.27	0.20	4	69.554				20205
19874	-24	16156	8.8	A0	34 43.054	0.05	3	69.913	-24 32 53.25	0.14	3	69.913				16260
19875	-22	5484	7.13	F5	34 48.159	0.16	4	70.862	-22 37 06.08	0.19	4	70.862	28699			16261
19876	-61	6500	9.01	K2	34 54.350	0.14	3	70.651	-61 00 09.16	0.06	3	70.651	28701			16262
19877	+25	4302	5.52	B9	34 56.596	0.14	6	71.669	+26 17 12.45	0.18	6	71.669	3649	28702		33649
19878	-44	14062	7.36	K0	20 34 58.542	0.11	5	71.155	-44 42 01.68	0.03	5	71.155	28703			2456
19879	-17	6039	6.96	A0	34 59.034	--	1	71.732	-17 17 52.88	--	1	71.732	28704			16263
19880	-12	5789	8.4	K0	35 07.373	--	1	71.557	-12 11 30.92	--	1	71.557				16264
19881	-35	14243	9.1	K2	35 15.591	0.50	2	70.614	-35 28 36.12	0.03	2	70.614				16265
19882	-42	15005	9.5	K0	35 20.756	0.05	4	71.079	-41 56 22.96	0.37	4	71.079				2457
19883	-4	5204	7.25	K0	20 35 30.819	--	1	71.718	-4 33 28.46	--	1	71.718	28716			16266
19884	-51	12647	8.0	K0	35 42.371	0.07	4	71.325	-50 49 42.34	0.16	4	71.325				2458
19885	-5	5330	7.85	G0	35 43.186	0.13	2	72.584	-4 41 17.02	--	1	71.748	28723			16267
19886	-65	3860	8.4	K2	35 51.290	0.09	4	71.322	-65 14 58.29	0.14	4	71.322				20206
19887	-17	6045	8.2	K5	35 52.770	--	1	71.644	-17 14 29.08	--	1	71.644	28729			16269
19888	-70	2798	9.2	G0	20 35 53.905	0.10	4	71.269	-69 56 23.58	0.16	4	71.269				20207
19889	-76	1434	6.14	F0	35 57.319	0.13	6	70.577	-76 21 30.85	0.13	6	70.577	3650	28731	4557	33650
19889	SP				35 57.273	0.10	6	70.507	-76 21 31.25	0.17	6	70.507	3650	28731	4557	53650
19890	-74	1921	9.4	K0	35 58.786	0.21	4	70.071	-73 48 14.77	0.15	4	70.071				20208
19891	-33	15102	7.3	K0	36 01.793	0.14	3	71.276	-33 21 13.85	0.05	3	71.276				16270
19892	-0	4059	8.8	F8	20 36 02.769	--	1	71.726	-0 15 27.97	--	1	71.726				16271
19893	-37	13854	8.5	K0	36 05.577	0.08	3	70.596	-36 56 14.81	0.06	3	70.596	1539	28740	4559	16272
19894	+20	4658	4.78	A0	36 17.374	0.29	4	70.484	+21 01 29.14	0.11	4	70.484	28744			31539
19895	-19	5877	8.23	K2	36 23.711	--	1	71.740	-19 27 19.30	--	1	71.740	28751			16273
19896	-41	14155	8.78	F0	36 35.970	0.30	4	70.749	-41 08 56.93	0.23	4	70.749				2459
19897	-6	5546	7.4	K5	20 36 38.352	--	1	72.460	-6 22 05.29	--	1	72.460				16274
19898	-32	16107	9.2	K5	36 41.522	0.16	3	70.692	-32 18 20.76	0.18	3	70.692	772	28756	4564	16275
19899	+9	4600	5.23	G5	36 42.451	0.04	24	70.846	+9 54 32.71	0.09	24	70.846	28757			80772
19900	-15	5746	8.6	K0	36 45.163	--	1	71.792	-15 09 07.04	--	1	71.792				16276
19901	-64	4064	8.9	K0	36 45.205	0.22	4	70.304	-64 12 48.22	0.20	4	70.304				20209
19902	-0	4064	5.39	K0	20 36 51.263	0.08	6	70.571	+0 18 33.73	0.07	6	70.571	3651	28761	4566	33651
19903	-39	13909	8.8	K2	36 52.303	0.18	3	70.533	-39 30 29.31	0.19	3	70.533				16277
19904	-47	13496	7.30	K0	36 53.794	0.09	4	71.154	-47 00 15.35	0.19	4	71.154	28762			2460
19905	-88	175	8.5	K5	36 54.178	0.18	4	69.536	-88 38 43.10	0.12	4	69.536				20210
19905	SP				36 54.423	0.09	4	69.510	-88 38 42.81	0.09	4	69.510				20210
19906	-28	16830	7.63	G5	20 36 54.913	0.09	4	70.039	-27 53 40.65	0.09	4	70.039	28763			16279
19907	-43	14124	7.84	K0	36 58.532	0.19	4	71.277	-43 14 30.88	0.20	4	71.277	28768			2461
19908	-56	9534	8.9	F5	36 58.918	0.11	4	71.405	-56 09 37.63	0.22	4	71.405				16280
19909	-38	14160	8.0	G5	36 59.978	0.17	4	71.150	-37 45 35.49	0.09	4	71.150				16281
19910	-34	14536	7.9	K2	37 01.227	0.12	4	70.786	-34 13 39.12	0.06	4	70.786				16282
19911*	+4	4510	8.4	K5	20 37 06.705	--	1	71.759	+4 47 37.58	--	1	71.759	28771			16283
19912	-33	15119	5.54	K2	37 11.920	0.04	34	71.183	-33 36 35.80	0.06	34	71.183	1540	28776	4567	31540
19913	-18	5738	5.33	M0	37 12.268	0.03	79	70.969	-18 18 58.15	0.04	76	70.903	773	28777	4568	80773
19914	-46	13652	8.8	K0	37 12.720	0.06	4	71.431	-45 50 44.71	0.23	3	70.769				2462
19915	-8	5426	8.0	K0	37 13.112	--	1	71.797	-7 45 01.99	--	1	71.797				16284
19916	-21	5789	8.1	K2	20 37 17.040	0.10	4	71.290	-21 08 17.78	0.19	4	71.290				16285
19917	-50	13084	9.0	K2	37 18.844	0.07	4	69.995	-50 17 54.32	0.26	4	69.995				2463
19918	+15	4222	3.86	B8	37 18.962	0.09	2	70.056	+15 44 04.47	0.53	2	70.056	774	28780	4569	30774
19919	-52	11738	8.8	M0	37 21.895	0.02	4	70.174	-52 03 32.01	0.12	4	70.174				16286
19920	-29	17240	7.8	K0	37 22.802	0.16	4	70.669	-29 22 36.58	0.10	4	70.669				16287
19921	-24	16195	7.10	G0	20 37 25.063	0.03	3	70.689	-24 17 36.94	0.18	3	70.689	28783			16288
19922	-27	14959	6.41	G0	37 36.200	0.14	4	70.880	-26 49 23.23	0.22	3	70.033	28791			16289
19923	-3	4981	6.67	K0	37 36.284	--	1	71.732	-2 49 56.99	--	1	71.732	28792			16290
19924	+2	4220	6.94	K0	37 46.814	--	1	72.465	+3 15 47.06	--	1	72.465	28799			16293
19925	-10	5470	8.6	G5	37 47.277	--	1	69.538	-10 22 23.39	--	1					16294
19926	-59	7631	7.8	K5	20 37 51.098	0.16	4	69.899	-59 37 26.55	0.14	4	69.899				16295
19927	-25	14957	7.5	K5	37 51.800	0.14	4	70.231	-25 13 40.55	0.21	4	70.231				16296
19928	-55	9453	8.6	K5	38 05.458	0.12	4	69.845	-54 44 14.16	0.09	4	69.845				16297
19929	-18	5743	8.6	A2	38 08.045	--	1	71.688	-17 58 26.93	--	1	71.688				16298
19930	+0	4569	8.5	G0	38 12.469	--	1	71.644	+0 45 39.43	--	1	71.644				16299
19931	-15	5755	8.5	F0	20 38 13.023	--	1	71.677	-14 41 24.27	--	1	71.677				16301
19932	-9	5540	8.5	K0	38 13.034	--	1	71.696	-8 48 59.33	--	1	71.696				16300
19933	-48	13630	8.5	K2	38 17.825	0.12	4	70.385	-48 05 30.39	0.06	4	70.385				2464
19934	-32	16130	5.80	M0	38 17.984	0.05	6	70.478	-31 46 35.98	0.06	6	70.478	3652	28808	4574	33652
19935	-79	1107	8.56	K5	38 20.804	0.16	4	70.859	-79 16 14.35	0.19	4	70.859	28810			20211
19935	SP				20 38 20.718	0.12	4	69.544	-79 16 13.83	0.09	4	69.544	28810			20211
19936	-10	5473	8.0	K0	38 24.629	--	1	71.617	-9 49 22.50	--	1	71.617				16302
19937	-40	13987	9.0	K2	38 25.694	0.15	4	70.422	-40 36 07.68	0.06	4	70.422				2465
19938	-14	5815	8.4	K0	38 26.709	0.03	2	72.033	-13 40 44.64	0.37	2	72.033				16303
19939	-32	16132	8.8	K2	38 27.411	0.10	3	70.590	-31 49 18.76	0.19	3	70.590				16304

19911 8.8m-9.8m, 0.71.

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
19940	-17	6059	6.91	K0	20 38 29.248	-	1	71.669	-17 33 26.20	-	1	71.669		28813		16305
19941	-49	13194	8.0	K5	38 30.566	0.07	4	71.041	-48 57 45.31	0.16	4	71.041				2466
19942	-56	9539	9.2	A5	38 42.079	0.07	4	70.300	-55 51 17.98	0.09	4	70.300				16306
19943	-45	13978	7.09	A0	38 50.878	0.07	4	70.732	-45 03 52.90	0.17	4	70.732		28824		2467
19944	-63	4606	8.01	K2	38 52.246	0.18	4	70.619	-63 09 18.14	0.19	4	70.619		28825		16307
19945	-12	5808	8.7	F8	20 38 58.284	0.17	2	72.136	-12 31 03.97	0.19	2	72.136				16308
19946	-11	5394	7.70	G0	39 01.873	0.23	2	71.514	-11 07 28.49	0.04	2	71.514		28828		16309
19947	-39	13927	8.7	K0	39 02.169	0.18	4	70.552	-38 45 47.94	0.04	4	70.552				16310
19948	-2	5337	8.5	A2	39 05.425	0.06	2	71.732	-1 58 12.97	0.17	2	71.732				16311
19949	-26	15198	9.19	K2	39 08.936	0.17	4	70.073	-26 39 35.77	0.06	4	70.073		28831		16312
19950	-69	3131	9.2	F8	20 39 10.395	0.30	4	71.021	-68 44 56.52	0.28	4	71.021				20212
19951	-31	17780	8.5	F0	39 12.543	0.16	4	69.641	-30 44 22.03	0.15	4	69.641				16313
19952	-23	16433	8.8	K2	39 15.979	0.02	4	70.030	-23 10 51.35	0.07	4	70.030				16314
19953	-17	6060	8.9	K2	39 23.498	0.07	2	71.554	-17 15 30.08	0.06	2	71.554				16315
19954	-71	2569	8.4	A0	39 32.171	0.10	4	70.775	-71 24 53.37	0.17	4	70.775				20213
19955	-82	822	8.8	G5	20 39 40.058	0.23	4	70.032	-82 27 05.46	0.04	4	70.032				20214
19955	SP				39 40.307	0.26	4	69.562	-82 27 05.30	0.14	4	69.562				20214
19956	-46	13671	9.0	K2	39 40.280	0.17	4	71.932	-46 10 22.19	0.19	4	71.932				2468
19957	-62	6177	9.0	K0	39 42.003	0.14	4	70.316	-62 10 47.37	0.12	4	70.316				16316
19958	-42	15052	9.0	K0	39 44.770	0.11	4	71.027	-42 16 10.64	0.13	4	71.027				2469
19959	-72	2548	9.2	G5	20 39 48.796	0.07	4	71.368	-72 37 11.46	0.18	4	71.368				20215
19960	-13	5736	7.8	G0	39 51.762	0.01	2	72.175	-13 16 25.50	0.05	2	72.175		28849		16317
19961	-20	6011	8.6	G5	40 05.787	0.18	2	71.751	-19 40 02.08	0.09	2	71.751				16318
19962	-48	13659	9.0	K5	40 07.968	0.15	3	70.662	-47 54 28.89	0.15	3	70.662				2470
19963	-22	5508	8.8	K0	40 13.329	0.07	4	69.892	-22 08 35.18	0.09	4	69.892				16319
19964	-38	14184	9.1	K5	20 40 14.207	0.09	5	71.713	-37 55 31.07	0.14	4	71.286				16320
19965	-80	978	7.56	G5	40 18.148	0.13	4	70.350	-80 02 10.60	0.21	4	70.350		28858		20216
19965	SP				40 18.085	0.05	4	70.039	-80 02 10.73	0.24	4	70.039		28858		20216
19966	-71	2570	8.2	F0	40 19.495	0.23	4	71.350	-70 53 46.13	0.32	4	71.350				20218
19967	-52	11752	4.70	F0	40 23.039	0.03	113	70.957	-52 06 05.69	0.03	113	70.957	776	28860	4580	30776
19968	-40	13999	8.0	K0	20 40 25.284	0.07	5	70.942	-40 14 28.16	0.12	5	70.942				2471
19969	-66	3501	3.60	A5	40 28.474	0.04	45	70.750	-66 23 05.30	0.04	44	70.774	775	28862	4581	30775
19970	-36	14371	8.9	K0	40 33.085	0.08	3	70.349	-35 49 16.34	0.04	3	70.349				16321
19971	-30	18133	7.9	K2	40 33.696	0.16	4	68.965	-30 24 35.47	0.04	4	68.965				16322
19972	+ 3	4407	8.9	G5	40 35.363	0.16	2	72.536	+ 3 25 26.03	-	1	71.652				16323
19973	-32	16161	7.40	K2	20 40 58.588	0.32	4	70.839	-32 06 34.66	0.16	4	70.839		28871		16324
19974	-2	5351	8.0	K0	41 06.932	0.18	2	72.025	-2 37 52.29	0.23	2	72.025				16325
19975	+14	4403	4.53	A5	41 07.372	0.15	8	70.130	+14 53 37.96	0.10	7	70.083	778	28873	4583	30778
19976	+ 3	4411	7.9	K5	41 11.679	0.22	2	71.567	+ 3 53 49.95	0.15	2	71.567		28878		16326
19977	-34	14589	9.0	K	41 12.414	0.19	3	70.296	-34 42 01.49	0.02	3	70.296				16327
19978*	- 6	5567	8.1	G5	20 41 14.672	-	1	72.362	- 6 08 06.58	-	1	72.362				16328
19979	-12	5821	8.4	K2	41 24.855	0.18	2	72.168	-11 47 06.30	0.49	2	72.168		28884		16329
19980	- 4	5240	8.9	K5	41 30.374	-	1	71.685	- 4 17 28.20	-	1	71.685				16330
19981	-28	16879	7.08	A3	41 34.209	0.18	4	69.854	-28 23 10.32	0.08	4	69.854		28892		16331
19982	- 4	5241	7.20	K0	41 35.296	-	1	70.745	- 4 05 49.05	-	1	70.745		28893		16332
19983	-40	14008	8.1	K0	20 41 35.904	0.14	4	71.601	-39 44 33.88	0.19	4	71.601				16333
19984	-55	9461	8.7	F0	41 35.968	0.16	4	70.527	-54 57 24.90	0.17	4	70.527				16334
19985	-47	13534	8.6	K2	41 40.243	0.15	4	71.521	-47 27 54.59	0.16	4	71.521				2472
19986	+ 1	4354	8.8	F8	41 43.799	-	1	71.699	+ 1 38 14.17	-	1	71.699				16335
19987	-14	5839	7.01	M0	41 46.587	0.02	2	70.581	-14 22 03.28	0.26	2	70.581			4585	16336
19988	-11	5408	8.4	G0	20 41 53.596	-	1	71.702	-10 40 33.23	-	1	71.702				16337
19989	-41	14203	8.5	K2	41 55.382	0.11	4	71.131	-41 28 41.70	0.11	4	71.131				2473
19990	-57	9750	8.4	F5	41 56.695	0.09	4	70.332	-57 08 08.94	0.04	4	70.332				16338
19991	- 0	4079	8.6	A2	42 02.578	0.32	2	71.557	- 0 16 59.78	0.28	2	71.557				16339
19992	-44	14121	8.5	K0	42 04.443	0.09	4	70.608	-43 55 58.14	0.15	4	70.608				2474
19993	-31	17817	8.6	F8	20 42 09.643	0.15	4	70.392	-31 08 15.42	0.14	4	70.392				16340
19994	-11	5409	8.6	K0	42 13.265	0.00	2	72.157	-11 12 46.79	0.38	2	72.157				16341
19995	-38	14200	9.2	K0	42 15.140	0.34	4	70.335	-38 14 52.84	0.34	3	70.188				16342
19996	+ 4	4533	8.7	F8	42 15.333	-	1	71.688	+ 4 42 39.22	-	1	71.688				16343
19997	- 0	4084	7.43	G5	42 23.254	0.15	2	72.003	+ 0 06 36.67	0.03	2	72.003		28912		16344
19998	-15	5780	8.0	G5	20 42 35.540	0.08	2	71.717	-15 13 03.05	0.14	2	71.717				16345
19999	-51	12697	9.5	K0	42 38.375	0.17	4	70.390	-51 26 55.50	0.26	4	70.390				2475
20000	+24	4229	5.13	K2	42 42.521	0.09	6	70.441	+25 05 22.59	0.18	6	70.441	3657	28920		33657
20001	-74	1927	8.8	K5	42 55.243	0.16	5	69.664	-74 29 32.36	0.17	5	69.664				20219
20002	- 1	4046	8.6	G0	43 00.525	0.01	2	71.708	- 1 36 45.55	0.18	2	71.708				16346
20003	-39	13960	5.53	B8	20 43 04.990	0.12	6	70.823	-39 22 56.48	0.18	6	70.823	3658	28927	4588	33658
20004	-25	15018	4.26	F8	43 08.215	0.03	44	70.910	-25 27 10.21	0.05	43	70.852	779	28929	4589	30779
20005	- 3	5007	8.8	G5	43 09.204	0.43	2	72.121	- 3 35 24.60	0.17	2	72.121				16347
20006	- 8	5469	8.4	F5	43 15.937	0.46	2	72.150	- 8 38 21.93	0.21	2	72.150		28932		16348
20007	-22	5523	5.89	A0	43 16.234	0.11	6	69.810	-21 41 49.84	0.18	6	69.810	3659	28933		16349
20008	-58	7777	7.8	K0	20 43 18.417	0.12	4	69.100	-58 05 04.14	0.10	4	69.100				16350
20009	-24	16262	7.18	A0	43 20.717	0.14	4	70.443	-23 54 26.39	0.25	4	70.443		28935		16351
20010	-26	15258	8.6	G5	43 21.618	0.13	4	71.302	-26 21 34.60	0.09	4	71.302				16352
20011	- 1	4047	8.1	G5	43 24.449	-	1	70.702	- 1 00 28.65	-	1	70.702				16353
20012	-49	13221	8.7	K2	43 28.092	0.12	4	70.098	-49 12 16.83	0.12	4	70.098				2476

19978 8.6m-8.7m, 0.2.

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
20013	+ 2	4242	8.8	A3	20 43 29.094	-	1	70.641	+ 2 33 25.58	-	1	70.641				16354
20014	-34	14622	8.9	G5	43 32.453	0.14	4	70.520	-33 47 15.61	0.15	4	70.520				16355
20015	-29	17314	8.7	A2	43 33.874	0.12	3	70.718	-29 00 05.69	0.08	3	70.718				16356
20016	-25	15024	7.8	F8	43 34.502	0.22	3	70.653	-25 05 52.49	0.17	3	70.653				16357
20017	-22	5526	7.24	K0	43 35.779	0.24	4	70.227	-22 20 50.14	0.24	4	70.227	28941			16358
20018	-19	5920	8.6	K0	20 43 36.975	-	1	71.521	-18 59 32.14	-	1	71.521				16359
20019	-17	6081	7.9	G0	43 45.026	0.02	2	72.115	-17 20 46.21	0.18	2	72.115				16360
20020	-27	15029	8.07	F0	43 45.387	0.13	3	70.515	-27 22 01.07	0.13	3	70.515	28946			16361
20021	-76	1446	8.06	K0	43 46.485	0.30	4	70.728	-76 01 05.75	0.19	4	70.728	28948			20220
20021	SP				43 46.442	0.20	4	70.001	-76 01 05.41	0.22	4	70.001	28948			20220
20022	-61	6505	9.0	K0	20 43 54.734	0.09	4	70.289	-61 02 10.48	0.07	4	70.289				16362
20023	-35	14353	8.2	G5	44 07.072	0.21	4	70.870	-35 20 15.49	0.18	4	70.870				16363
20024*	-46	13700	9.0	F0	44 10.598	0.33	4	71.122	-45 44 44.78	0.15	4	71.122				2477
20025	- 3	5017	8.0	A2	44 13.997	0.01	2	70.572	- 2 53 55.92	0.29	2	70.572				16364
20026†	+15	4255	4.49	G5	44 20.198	0.18	4	69.535	+15 56 30.89	0.12	4	69.535	1541	28966	4594	31541
20027	-53	9939	9.0	G5	20 44 28.686	0.11	4	70.098	-52 44 43.85	0.21	4	70.098				16365
20028	- 2	5366	8.2	K0	44 29.174	0.00	2	72.192	- 1 52 41.03	0.04	2	72.192				16366
20029	-19	5925	8.6	G0	44 32.183	-	1	71.603	-18 48 19.00	-	1	71.603				16367
20030	-37	13926	9.2	K0	44 33.904	0.11	4	70.931	-36 46 43.39	0.17	4	70.931				16368
20031	-75	1657	8.5	F5	44 34.555	0.21	4	70.620	-75 13 23.14	0.23	4	70.620				20222
20031	SP				20 44 34.538	0.25	4	70.089	-75 13 22.85	0.04	4	70.089				20222
20032	-69	3138	5.47	K0	44 35.671	0.13	6	70.141	-68 57 41.17	0.17	6	70.141	3660	28969	4595	33660
20033	- 5	5372	8.01	F2	44 36.000	-	1	71.650	- 5 16 03.33	-	1	71.650	28970			16369
20034	-16	5695	8.4	K0	44 39.314	-	1	71.655	-15 47 59.14	-	1	71.655				16370
20035	-50	13139	8.5	K0	44 49.487	0.05	4	70.299	-50 08 10.49	0.15	4	70.299				2478
20036	-28	16918	7.46	G5	20 44 52.576	0.32	4	70.883	-27 56 06.98	0.34	4	70.883		28973		16371
20037	-35	14365	9.0	G0	44 56.758	0.10	4	71.350	-34 56 03.78	0.11	4	71.350				16372
20038	-10	5506	3.83	A0	44 58.258	0.03	68	71.144	- 9 40 48.83	0.04	68	71.144	781	28978	4597	80781
20039	- 7	5402	8.6	K0	44 59.495	-	1	71.696	- 7 17 45.32	-	1	71.696				16373
20040	- 5	5378	4.60	M0	45 05.979	0.08	13	70.685	- 5 12 44.03	0.12	13	70.685	1543	28979	4599	31543
20041	-79	1114	9.0	K	20 45 06.511	0.27	4	70.259	-79 03 36.49	0.15	4	70.259				20223
20041	SP				45 06.563	0.15	4	70.047	-79 03 36.03	0.04	4	70.047				20223
20042	-44	14145	5.14	F0	45 06.555	0.04	34	71.243	-44 10 22.33	0.05	33	71.177	1542	28980	4600	31542
20043	-73	2175	8.9	K5	45 09.769	0.08	4	70.290	-73 10 02.30	0.18	4	70.290				20224
20044	-43	14204	7.00	K2	45 15.706	0.10	4	71.183	-43 11 33.74	0.19	4	71.183		28982		2479
20045	-64	4076	9.2	K0	20 45 19.790	0.13	4	70.847	-63 54 52.49	0.23	4	70.847				16374
20046	-23	16505	7.88	A2	45 21.970	0.08	4	70.756	-23 01 50.68	0.22	4	70.756		28989		16375
20047*	-31	17858	8.8	G5	45 23.399	0.31	4	70.065	-31 37 19.59	0.38	4	70.065				16376
20048	-10	5508	7.6	K0	45 25.787	0.21	2	71.532	- 9 56 01.89	0.26	2	71.532				16377
20049	-53	9942	8.2	F5	45 34.681	0.04	4	70.342	-52 53 33.26	0.29	4	70.342				16378
20050	- 0	4096	8.8	A5	20 45 40.190	0.39	2	72.248	- 0 29 05.21	0.07	2	72.248				16379
20051	-15	5796	8.9	K0	45 40.813	0.05	2	72.536	-15 05 29.91	-	1	71.652				16380
20052	-21	5837	9.0	A0	45 41.767	0.12	4	70.623	-20 58 09.98	0.17	4	70.623				16381
20053	-46	13716	9.3	G5	45 42.156	0.10	4	71.271	-45 53 20.44	0.29	4	71.271				2480
20054	-67	3760	7.8	K	45 46.443	0.06	4	69.862	-67 22 14.67	0.06	4	69.862				20225
20055	+ 3	4430	6.60	B9	20 45 53.864	-	1	71.521	+ 3 27 48.91	-	1	71.521		29005		16382
20056	-33	15211	8.2	K2	45 57.666	0.08	4	70.367	-33 12 03.28	0.11	4	70.367				16383
20057	-29	17352	8.1	K2	45 59.972	0.19	3	69.902	-29 13 07.08	0.14	3	69.902				16384
20058	-46	13718	4.90	K5	46 03.011	0.14	6	70.131	-46 24 47.61	0.13	6	70.131	3661	29008	4604	33661
20059	+ 0	4589	8.0	K2	46 09.092	-	1	71.639	+ 1 20 30.31	-	1	71.639				16385
20060	-42	15103	9.0	F5	20 46 10.858	0.14	4	70.922	-41 53 52.26	0.24	4	70.922				2481
20061	-13	5766	8.2	G0	46 19.123	0.26	2	72.463	-12 47 47.82	0.24	2	72.463		29016		16386
20062	-21	5840	8.2	G5	46 22.147	0.15	4	70.108	-20 48 54.79	0.20	4	70.108		29020		16387
20063	-18	5783	6.37	K0	46 30.491	0.14	5	72.248	-18 13 18.76	0.23	5	72.248	3663	29023		16388
20064	-37	13945	7.9	K0	46 36.806	0.18	4	70.083	-37 02 29.48	0.14	4	70.083				16389
20065	-59	7644	8.1	K2	20 46 37.333	0.04	4	69.028	-59 06 37.56	0.20	4	69.028				16390
20066	- 9	5587	8.0	M0	46 37.857	0.11	2	72.153	- 8 58 49.06	0.01	2	72.153				16391
20067	-34	14655	8.8	K2	46 41.514	0.18	4	70.144	-34 06 37.62	0.06	4	70.144				16392
20068	- 1	4057	6.53	M3	46 42.934	0.04	38	71.634	- 0 44 57.93	0.06	38	71.634	1545	29025	4607	31545
20069	+ 4	4552	8.5	K0	46 43.334	0.18	2	70.570	+ 4 50 20.25	0.10	2	70.570				16393
20070	+ 3	4433	8.0	K5	20 46 48.148	0.28	2	71.948	+ 3 50 43.24	0.07	2	71.948				16394
20071	-25	15060	8.8	F2	46 52.214	0.08	4	69.974	-25 00 29.33	0.11	4	69.974				16395
20072	- 4	5270	8.6	K0	46 59.919	0.01	2	71.571	- 4 04 31.37	0.10	2	71.571				16396
20073	-38	14244	8.6	K2	47 00.099	0.08	4	70.552	-38 25 39.92	0.18	4	70.552				16397
20074	- 7	5413	7.8	F8	47 09.041	0.01	2	71.050	- 6 53 01.73	0.15	2	71.050				16398
20075	-30	18214	9.0	F5	20 47 14.186	0.13	4	70.420	-30 36 37.01	0.17	4	70.420				16399
20076	- 0	4106	7.8	K2	47 15.865	0.01	2	71.650	- 0 30 39.89	0.02	2	71.650				16400
20077	-45	14054	8.8	K2	47 17.054	0.04	4	69.623	-45 04 32.66	0.14	4	69.623				2482
20078	+ 7	4556	6.23	A0	47 21.183	0.12	7	70.281	+ 7 40 38.01	0.05	6	70.251	3664	29039		33664
20079	+ 1	4374	7.6	K5	47 26.977	0.27	2	71.532	+ 2 14 49.11	0.06	2	71.532		29041		16401
20080	-39	13989	7.8	K2	20 47 32.602	0.19	4	70.042	-39 35 02.07	0.16	4	70.042				16402
20081	-25	15067	6.64	F8	47 33.380	0.07	4	69.649	-25 10 08.69	0.23	4	69.649		29045		16403
20082	-66	3507	8.7	K2	47 45.698	0.08	4	69.100	-66 43 07.51	0.15	4	69.100				20226
20083	-51	12732	8.5	F5	47 49.479	0.14	4	69.153	-50 50 14.88	0.12	4	69.153				2483
20084	-65	3868	8.7	G0	47 52.378	0.18	4	70.398	-65 19 58.32	0.10	4	70.398				20227

20024 SDS, 9.9m-10.1m, 0°5, 222°.
20026 A 14279, 5.47m, 10°9, 271°.

20047 SDS, 9.0m-11.3m, 1°5, 318°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
20085	-13	5773	5.99	K0	20 47 56.648	0.05	6	69.021	-12 43 54.35	0.05	6	69.021	3665	29057	4614	33665
20086	-17	6104	8.8	K0	48 07.932	0.11	2	71.716	-17 28 43.80	0.16	2	71.716				16404
20087	-3	5043	9.0	K5	48 12.621	0.07	2	71.675	-3 32 34.99	0.12	2	71.675				16405
20088	-16	5711	8.1	K0	48 17.380	0.12	2	71.147	-16 36 08.64	0.35	2	71.147				16406
20089	-27	15077	8.6	K5	48 23.837	0.15	4	69.523	-26 58 04.24	0.09	4	69.523				16407
20090	-35	14399	9.0	K5	20 48 28.628	0.13	4	70.506	-35 02 56.92	0.25	4	70.506				16408
20091	-71	2577	9.0	K0	48 39.734	0.03	4	69.912	-71 42 24.84	0.03	4	69.912				20228
20092	-8	5495	8.7	K2	48 40.470	0.22	3	72.218	-8 07 59.86	0.07	3	72.218				16409
20093	-14	5867	8.8	K5	48 48.190	0.14	2	72.104	-13 56 17.37	0.17	2	72.104				16410
20094	-27	15082	4.24	M0	48 50.442	0.03	75	71.124	-27 06 27.14	0.03	73	71.084	1546	29079	4619	31546
20095	-57	9762	8.1	K0	20 48 55.023	0.07	4	69.543	-56 54 30.57	0.30	4	69.543				16411
20096	-48	13706	8.0	K2	49 03.415	0.16	4	70.040	-48 26 38.46	0.17	4	70.040				2484
20097	-10	5526	8.0	G0	49 04.466	0.32	2	71.442	-10 30 20.44	0.47	2	71.442				16412
20098	-55	9477	8.6	K0	49 10.937	0.09	4	69.950	-54 45 09.89	0.09	4	69.950				16413
20099	-11	5447	7.15	K0	49 16.802	0.21	2	71.722	-11 37 40.84	0.08	2	71.722	29086			16414
20100	-56	9557	7.68	K0	20 49 17.486	0.09	4	70.116	-56 24 33.63	0.29	4	70.116	29087			16415
20101	-9	5596	8.7	K0	49 17.848	0.30	2	71.959	-9 35 18.36	0.14	2	71.959				16416
20102	-50	13161	8.5	G5	49 20.212	0.12	4	69.979	-50 42 40.37	0.28	4	69.979				2485
20103	-6	5605	8.4	G5	49 22.479	0.12	2	71.972	-6 07 17.84	0.34	2	71.972				16417
20104	-2	5390	8.6	A2	49 26.029	0.22	2	72.202	-2 27 00.16	0.00	2	72.202				16418
20105	-21	5852	7.2	K0	20 49 28.647	0.07	4	69.523	-21 25 11.77	0.12	4	69.523				16419
20106	-32	16262	8.5	K2	49 30.185	0.13	4	70.390	-31 52 56.25	0.30	4	70.390				16420
20107	-40	14070	8.3	G5	49 34.813	0.03	4	70.021	-40 33 59.43	0.16	4	70.021				2486
20108	-20	6056	8.5	K2	49 36.228	0.18	2	71.502	-19 43 07.93	0.03	2	71.502				16421
20109	-5	5402	8.31	K2	49 40.840	0.06	2	72.217	-4 53 29.70	0.19	2	72.217	29101			16422
20110	-43	14238	8.7	G5	20 49 46.089	0.09	4	70.543	-42 46 31.08	0.15	4	70.543				2487
20111	-62	6184	9.3	K0	49 53.206	0.20	4	70.620	-62 09 18.35	0.25	4	70.620				16423
20112	-49	13251	8.7	F5	49 54.753	0.14	4	70.397	-49 34 19.90	0.27	4	70.397				2488
20113	-9	5598	4.80	A3	49 57.541	0.04	36	71.257	-9 10 20.40	0.05	36	71.257	1547	29109	4621	31547
20114	-36	14448	9.0	G0	49 57.715	0.13	5	70.641	-36 03 29.37	0.11	5	70.641				16424
20115	-24	16325	8.3	K0	20 49 58.131	0.08	4	69.163	-24 24 13.89	0.04	4	69.163				16425
20116	-63	4619	7.19	K0	50 10.702	0.20	4	70.139	-63 01 32.19	0.14	4	70.139	29119			16426
20117	-41	14280	8.26	K0	50 18.257	0.22	4	70.595	-41 15 52.81	0.25	4	70.595	29123			2489
20118	-44	14181	7.4	K0	50 22.626	0.11	4	70.747	-44 31 50.79	0.22	4	70.747				2490
20119	-2	5392	8.4	F8	50 25.393	0.19	2	70.717	-2 26 02.32	0.14	2	70.717				16427
20120	-48	13713	9.1	K0	20 50 31.732	0.07	4	71.248	-48 04 49.76	0.18	4	71.248				2491
20121	-64	4084	8.5	K0	50 34.685	0.09	4	70.331	-64 23 25.21	0.13	4	70.331				20229
20122	-52	11789	8.6	K2	50 43.161	0.09	4	70.738	-52 12 48.08	0.18	4	70.738				16428
20123	-54	9761	8.0	K2	50 44.065	0.11	4	70.360	-53 46 47.57	0.17	4	70.360				16429
20124	-14	5875	8.5	G5	50 47.666	-	1	71.713	-14 36 37.73	-	1	71.713				16430
20125	-60	7436	8.1	K0	20 50 49.612	0.07	5	71.305	-60 24 01.82	0.27	5	71.305				16431
20126	-81	927	8.38	K0	50 50.812	0.10	4	70.316	-80 48 44.24	0.29	4	70.316	29131			20230
20126	SP				50 50.695	0.17	4	69.111	-80 48 44.00	0.25	4	69.111	29131			20230
20127	-47	13615	9.3	K0	50 51.207	0.20	5	71.591	-46 54 06.31	0.33	5	71.591				2492
20128	-35	14429	8.7	A0	50 51.237	0.10	4	70.781	-35 12 49.19	0.11	4	70.781				16432
20129	-0	4121	8.6	K2	20 50 53.509	0.16	2	72.228	+ 0 08 08.33	0.41	2	72.228				16433
20130	-58	7788	3.72	K0	50 55.101	0.04	74	71.054	-58 38 40.64	0.04	73	71.072	785	29133	4623	30785
20131	-12	5857	8.7	F8	50 55.911	0.14	2	72.199	-11 50 41.51	0.12	2	72.199				16434
20132	-33	15270	9.1	K0	51 06.397	0.09	4	71.330	-33 02 28.84	0.14	4	71.330				16435
20133	-32	16275	9.1	K0	51 10.061	0.17	4	71.281	-32 09 41.34	0.19	3	70.569				16436
20134	-83	699	7.3	K0	20 51 12.445	0.19	4	69.550	-83 20 22.91	0.73	4	69.550				20231
20134	SP				51 12.411	0.14	4	69.566	-83 20 23.31	0.11	4	69.566				20231
20135	-12	5858	8.2	F8	51 12.978	0.15	2	72.018	-12 28 55.49	0.03	2	72.018				16437
20136	-66	3510	7.7	G0	51 16.610	0.15	4	70.664	-66 20 27.83	0.13	4	70.664				20232
20137	-46	13749	9.6	G5	51 17.343	0.12	3	70.713	-45 55 17.29	0.11	3	70.713				2493
20138	-37	13983	8.8	F8	20 51 24.652	0.09	4	71.594	-37 05 06.35	0.23	4	71.594				16438
20139	+ 0	4610	8.4	K5	51 26.299	0.20	2	72.043	+ 1 14 02.60	0.24	2	72.043				16439
20140	-26	15326	7.52	K0	51 26.719	0.05	4	69.127	-25 46 00.34	0.11	4	69.127	29148			16440
20141	-58	7791	8.3	G5	51 32.394	0.08	4	70.207	-58 03 31.78	0.09	4	70.207				16441
20142	-60	7437	8.4	K5	51 35.842	0.05	4	70.308	-60 42 49.11	0.22	4	70.308				16442
20143	-28	16982	7.62	K2	20 51 36.236	0.15	4	71.226	-28 07 17.06	0.07	4	71.226				16443
20144	-35	14438	8.5	K5	51 36.779	0.11	4	70.542	-35 04 15.66	0.15	4	70.542				16444
20145	+ 3	4451	8.5	K2	51 37.009	0.10	2	70.546	+ 3 45 50.56	0.16	2	70.546	29156			16445
20146	-45	14099	8.6	K0	51 41.988	0.07	4	71.019	-45 34 32.04	0.14	4	71.019				2494
20147	-29	17418	8.4	K0	51 43.806	0.04	4	69.536	-29 35 58.27	0.12	4	69.536				16446
20148	-42	15145	9.5	K2	20 51 49.577	0.17	4	71.113	-41 51 47.61	0.04	4	71.113				2495
20149	-9	5611	7.02	K0	52 04.849	0.17	2	70.058	-9 04 27.51	0.00	2	70.058	29167			16447
20150	-23	16583	8.6	K0	52 09.951	0.09	4	69.925	-23 02 36.38	0.14	4	69.925				16448
20151	-30	18268	8.3	G0	52 11.590	0.16	4	71.102	-30 19 53.27	0.04	4	71.102				16449
20152	-51	12753	9.0	K0	52 14.079	0.02	3	69.939	-51 00 47.41	0.16	3	69.939				2496
20153	-40	14090	8.5	G5	20 52 15.220	0.08	4	70.148	-40 24 36.31	0.15	4	70.148				2497
20154	-58	7793	7.79	G5	52 19.362	0.06	4	70.588	-57 45 42.86	0.09	4	70.588	29173			16450
20155	-45	14103	7.06	K2	52 24.090	0.15	4	70.030	-44 46 03.12	0.14	4	70.030	29177			2498
20156	+27	3911	5.24	K5	52 25.645	0.05	47	70.972	+27 51 59.31	0.07	46	70.919	786	29178	4629	80786
20157	-55	9484	7.37	K0	52 27.036	0.07	4	70.146	-55 24 50.87	0.12	5	70.394	29180			16451

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
20158	-1	4075	6.58	F0	20 52 33.190	0.05	2	72.155	-1 33 53.69	0.45	2	72.155		29186		16452
20159	-31	17940	7.8	K2	52 35.166	0.14	4	69.970	-31 05 14.26	0.18	4	69.970				16453
20160	+1	4393	6.73	F2	52 36.072	0.13	2	71.720	+1 37 18.15	0.13	2	71.720		29187		16454
20161	-68	3392	7.7	K0	52 37.648	0.14	4	69.669	-67 53 29.91	0.14	4	69.669				20233
20162	-34	14736	8.7	K0	52 51.751	0.13	3	69.890	-34 11 09.77	0.19	3	69.890				16455
20163	-4	5303	8.5	K5	20 52 53.012	0.04	2	72.028	-4 00 14.67	0.07	2	72.028				16456
20164	-13	5791	8.4	F2	52 54.657	0.02	2	72.175	-13 03 32.88	0.28	2	72.175		29198		16457
20165	-65	3875	7.67	K0	53 04.914	0.15	4	69.438	-65 07 50.23	0.13	4	69.438				20234
20166	-15	5838	8.8	K5	53 12.676	-	1	71.639	-15 29 45.49	-	1	71.639				16458
20167	-41	14303	9.5	K0	53 12.912	0.16	4	70.027	-41 23 14.79	0.07	4	70.027				2499
20168	-19	5967	8.5	K0	20 53 14.533	-	1	71.652	-19 13 31.11	-	1	71.652				16459
20169	+13	4572	5.39	K0	53 14.600	0.09	6	69.083	+13 31 46.79	0.15	6	69.083	3669	29201	4632	33669
20170	+2	4275	8.3	A5	53 19.216	0.23	2	72.132	+3 12 02.36	0.07	2	72.132				16460
20171	-17	6129	7.63	K0	53 20.504	0.10	2	72.010	-17 26 07.64	0.04	2	72.010		29205		16461
20172	-8	5523	8.2	K0	53 26.646	0.05	2	72.029	-7 54 30.62	0.40	2	72.029				16462
20173	-5	5417	8.9	K5	20 53 42.410	0.02	2	71.961	-5 06 15.67	0.20	2	71.961				16463
20174	-38	14310	9.0	K0	53 59.308	0.18	4	70.617	-38 09 22.05	0.17	3	70.601				16464
20175	-1	4079	8.0	G5	53 59.308	0.20	2	72.183	-1 15 22.31	0.05	2	72.183				16465
20176	-22	5572	7.9	K0	53 59.387	0.06	4	70.400	-22 11 54.96	0.10	4	70.400				16466
20177	-37	14005	9.1	K0	54 00.911	0.05	4	69.644	-36 45 31.91	0.09	4	69.644				16467
20178	-49	13272	8.5	G5	20 54 02.971	0.10	4	70.101	-48 48 48.40	0.09	4	70.101				2500
20179	-10	5553	5.68	K2	54 11.934	0.06	2	71.449	-9 53 25.29	0.16	2	71.449		29220	4634	16468
20180	-74	1942	8.5	K5	54 14.812	0.02	4	69.344	-74 38 16.28	0.17	4	69.344				20235
20181	-56	9571	8.4	G5	54 16.155	0.14	4	69.344	-56 08 38.14	0.20	4	69.344				16469
20182	-24	16379	8.0	F5	54 22.017	0.05	4	69.599	-24 02 20.64	0.07	4	69.599				16470
20183	-7	5450	8.6	A2	20 54 22.967	0.16	2	71.952	-6 39 49.50	0.07	2	71.952		29226		16471
20184	+1	4398	8.2	F0	54 39.884	0.00	2	71.653	+2 16 27.05	0.29	2	71.653				16472
20185	-47	13636	9.3	G5	54 40.613	0.05	5	70.203	-47 38 22.03	0.12	5	70.203				2501
20186	+1	4399	8.2	K2	54 43.049	0.31	2	71.959	+2 08 21.79	0.39	2	71.959				16473
20187	+4	4584	8.1	A0	54 43.227	0.30	2	71.932	+4 53 13.11	0.02	2	71.932				16474
20188	-62	6190	8.7	M1	20 54 43.850	0.15	4	69.964	-62 00 19.07	0.25	4	69.964				16475
20189	-25	15138	8.3	K2	54 45.918	0.12	4	69.856	-25 04 46.04	0.09	4	69.856				16476
20190	-26	15350	8.61	K2	54 48.988	0.19	3	69.381	-26 25 59.30	0.08	3	69.381		29242		16477
20191	-54	9776	8.7	K2	54 51.087	0.17	4	69.922	-54 33 33.59	0.24	4	69.922				16478
20192	-3	5076	8.6	M0	54 52.637	0.09	2	72.098	-3 25 48.59	0.05	2	72.098		29244	4636	16479
20193	-16	5741	5.95	A3	20 54 52.878	0.03	97	71.185	-16 13 30.67	0.03	96	71.161	1548	29245	4637	31548
20194	+0	4621	9.0	A5	54 55.534	0.00	2	70.570	+0 24 30.09	0.20	2	70.570				16480
20195	-39	14044	8.7	K0	54 56.723	0.31	4	70.570	-39 11 01.47	0.34	4	70.570				16481
20196	-20	6081	8.7	G5	55 04.009	0.10	4	69.543	-20 16 03.33	0.14	4	69.543				16482
20197	+3	4466	6.88	K2	55 18.559	0.42	2	71.952	+4 00 06.30	0.36	2	71.952		29252	4640	16483
20198	-37	14019	8.8	K0	20 55 26.739	0.07	4	70.597	-37 06 42.78	0.11	4	70.597				16484
20199	-70	2815	9.0	K5	55 30.151	0.19	4	69.480	-69 55 21.33	0.17	4	69.480				20236
20200	-59	7660	8.28	K0	55 36.532	0.08	4	69.536	-59 03 13.15	0.16	4	69.536		29260		16485
20201	-54	9778	8.6	K0	55 48.376	0.03	4	69.896	-53 55 58.39	0.19	4	69.896				16486
20202	-15	5848	6.02	A3	55 55.737	0.04	2	71.954	-14 40 38.86	0.19	2	71.954		29265		16487
20203	+21	4424	5.57	K5	20 56 02.123	0.04	61	71.126	+22 07 53.67	0.05	60	71.087	1549	29267	4641	81549
20204	-30	18315	7.4	G5	56 23.242	0.05	4	69.991	-30 42 21.24	0.13	4	69.991				16488
20205	-43	14297	9.0	M0	56 24.971	0.11	5	70.644	-43 42 08.52	0.19	5	70.644				2502
20206	-7	5460	7.9	A3	56 26.980	0.03	2	72.091	-7 06 05.52	0.22	2	72.091			4642	16489
20207	-34	14782	9.2	K2	56 27.581	0.06	4	70.600	-34 37 18.42	0.08	4	70.600				16490
20208	-11	5484	8.5	K0	20 56 31.539	0.20	2	71.952	-10 54 30.84	0.09	2	71.952				16491
20209	-20	6090	8.4	G0	56 32.587	0.20	4	70.077	-20 38 21.79	0.12	4	70.077				16492
20210	-9	5636	8.9	G5	56 39.937	0.09	2	70.717	-9 04 24.65	0.07	2	70.717				16493
20211	-51	12778	5.88	F5	56 48.490	0.10	6	70.036	-51 27 43.58	0.08	6	70.036	3673	29288	4643	33673
20212	-55	9495	9.0	K2	56 50.744	0.16	4	69.801	-55 06 56.77	0.21	4	69.801				16494
20213	-36	14530	6.12	F0	20 56 50.783	0.08	6	69.381	-36 19 28.89	0.05	6	69.381	3674	29290	4644	33674
20214	-39	14058	9.2	K0	56 51.682	0.16	4	70.141	-38 54 59.37	0.17	4	70.141				16495
20215	-2	5421	8.3	K0	56 56.442	0.25	2	71.936	-1 39 47.44	0.68	2	71.936				16496
20216	-40	14125	9.0	K0	56 58.353	0.15	4	71.227	-40 18 29.93	0.13	4	71.227				2503
20217	-36	14532	9.1	G5	57 01.894	0.06	4	70.857	-36 18 14.85	0.17	4	70.857				16497
20218	-72	2576	8.8	A5	20 57 02.330	0.16	4	69.923	-72 01 46.89	0.03	4	69.923				20237
20219	-47	13655	9.0	G5	57 02.698	0.16	5	71.136	-47 13 00.27	0.15	5	71.136				2504
20220	-29	17471	8.3	K5	57 03.145	0.10	4	70.090	-29 40 20.61	0.02	4	70.090				16498
20221	+3	4476	8.7	K5	57 12.010	0.03	2	71.469	+4 04 38.60	0.12	2	71.469				16499
20222	-58	7800	8.6	K0	57 21.963	0.08	4	69.836	-58 26 04.96	0.17	4	69.836				16500
20223	-14	5907	8.2	K2	20 57 29.279	0.00	2	71.959	-13 41 39.90	0.08	2	71.959				16501
20224	-81	936	8.03	K0	57 35.701	0.12	4	70.493	-81 35 42.50	0.12	4	70.493		29308		20238
20224	SP				57 35.807	0.17	4	70.066	-81 35 42.21	0.27	4	70.066		29308		20238
20225	-31	18001	8.9	K5	57 48.145	0.13	4	70.180	-31 25 44.89	0.25	4	70.180				16502
20226	-32	16351	8.9	K0	57 50.421	0.08	4	71.128	-32 32 38.40	0.17	4	71.128				16503
20227	-49	13298	7.78	F5	20 57 53.008	0.06	4	70.816	-49 32 52.82	0.15	4	70.816				2505
20228	-5	5433	6.26	G0	57 55.962	0.03	59	71.541	-4 55 31.42	0.04	59	71.541	789	29318	4645	30789
20229	-61	6521	8.7	A2	57 59.455	0.10	4	70.282	-61 00 15.55	0.15	4	70.282				16504
20230	-5	5434	8.0	F2	58 02.370	0.16	2	70.572	-5 33 14.66	0.12	2	70.572		29321		16505
20231	-35	14509	7.63	G0	58 06.530	0.10	6	70.617	-35 22 48.83	0.17	6	70.617		29326		21163

CATALOG OF 23,001 STARS FOR 1950.0

515

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
20232	- 8	5544	8.1	G0	20 58 07.756	0.11	2	72.111	- 8 32 22.41	0.33	2	72.111				16506
20233	+18	4675	5.96	M0	58 10.476	0.07	6	69.114	+19 08 01.61	0.23	6	69.114	3675	29329		33675
20234	-32	16353	4.71	G5	58 13.717	0.03	61	71.232	-32 27 16.11	0.05	61	71.232	1550	29331	4647	31550
20235	-34	14802	9.0	K2	58 14.892	0.06	5	71.567	-33 44 27.18	0.05	4	71.104				16507
20236	-78	1370	8.59	K0	58 15.138	0.13	4	70.102	-77 44 36.01	0.29	4	70.102		29332		20239
20236	SP				20 58 15.138	0.17	4	70.381	-77 44 36.15	0.24	4	70.381		29332		20239
20237	-12	5886	8.0	K0	58 18.512	0.08	2	72.549	-11 39 26.09	--	1	71.677				16508
20238	-64	4088	8.1	K2	58 19.288	0.14	4	70.358	-64 09 39.07	0.04	4	70.358				20240
20239	- 1	4093	8.2	K0	58 30.377	--	1	71.685	- 0 57 56.40	--	1	71.685				16509
20240	-23	16649	7.6	K5	58 30.988	0.08	4	69.970	-23 16 30.93	0.16	4	69.970				16510
20241	- 4	5332	8.0	K5	20 58 31.874	0.08	2	72.183	- 3 38 17.25	0.69	2	72.183				16511
20242	-28	17057	7.38	K0	58 34.020	0.14	4	70.602	-28 00 01.55	0.07	4	70.602		29340		16512
20243	-50	13213	9.0	F0	58 34.535	0.11	4	70.369	-50 15 08.25	0.14	4	70.369				2506
20244	-19	5991	8.3	G5	58 36.377	0.02	2	70.534	-19 06 51.92	0.24	2	70.534				16513
20245	-42	15199	7.8	K5	58 38.761	0.09	4	71.123	-42 16 35.48	0.28	4	71.123				2507
20246	-77	1474	5.24	F2	20 58 44.031	0.05	40	70.803	-77 13 09.01	0.06	40	70.803	787	29343	4648	30787
20246	SP				58 44.008	0.10	18	70.877	-77 13 09.09	0.15	17	70.803	787	29343	4648	50787
20247	- 3	5092	8.0	G0	58 46.483	--	1	71.713	- 2 42 39.47	--	1	71.713				16514
20248	-17	6155	8.1	K2	58 48.070	--	1	71.759	-16 37 57.44	--	1	71.759				16516
20249	-24	16423	8.4	G0	58 48.085	0.15	4	70.850	-23 59 46.31	0.22	4	70.850				16515
20250	-63	4630	8.7	K5	20 58 50.935	0.09	4	70.892	-63 26 57.60	0.28	4	70.892				16517
20251	+ 0	4642	8.5	A0	59 00.527	--	1	71.786	+ 1 18 25.28	--	1	71.786				16518
20252	- 4	5337	7.3	M1	59 03.187	0.16	2	72.077	- 4 19 43.54	0.50	2	72.077				16519
20253	-52	11809	8.5	K2	59 11.412	0.20	3	70.659	-52 06 09.63	0.04	3	70.659				16520
20254	-21	5901	8.6	G5	59 15.412	0.06	4	70.677	-21 31 46.61	0.23	4	70.677				16521
20255	-70	2823	8.2	K2	20 59 20.586	0.12	4	71.100	-70 18 21.90	0.12	4	71.100				20241
20256	-58	7802	9.0	F8	59 21.312	0.17	3	70.603	-58 41 43.67	0.06	3	70.603				16522
20257	-39	14082	8.9	K0	59 27.789	0.08	3	70.635	-39 28 42.44	0.17	3	70.635				16523
20258	-35	14524	8.5	K0	59 34.375	0.09	4	70.782	-35 30 44.18	0.16	4	70.782				16525
20259	-13	5830	7.30	K2	59 41.685	--	1	71.650	-12 38 40.81	--	1	71.650		29359		16526
20260	-68	3400	8.7	K0	20 59 42.701	0.11	4	71.402	-68 24 44.59	0.33	4	71.402				20242
20261	-39	14089	5.35	F0	59 46.550	0.08	18	70.577	-38 49 43.24	0.07	18	70.577	790	29363	4651	30790
20262	-62	6193	9.1	K2	59 49.716	0.18	4	71.613	-62 22 28.96	0.13	4	71.613				16527
20263	-25	15195	7.56	A0	21 00 21.962	0.21	4	70.744	-25 16 21.48	0.09	4	70.744		29375		16529
20264	-18	5844	8.6	K0	00 31.437	0.00	2	70.622	-17 40 01.70	0.33	2	70.622		29383		16532
20265	-22	5595	8.3	K0	21 00 31.607	0.18	3	70.324	-21 44 07.28	0.09	3	70.324				16533
20266	+ 1	4413	7.47	K0	00 31.676	0.25	2	72.600	+ 1 29 44.62	0.05	2	72.600		29384		16534
20267	-41	14360	8.2	G5	00 34.758	0.10	4	70.133	-40 53 21.78	0.10	4	70.133				2508
20268	-54	9794	8.5	G5	00 34.806	0.08	4	70.661	-54 35 09.35	0.15	4	70.661				16535
20269	-33	15361	9.0	F8	00 46.693	0.07	4	71.524	-32 42 44.46	0.12	4	71.524				16536
20270*	-24	16443	7.74	F5	21 00 53.192	0.14	4	71.106	-24 31 16.04	0.15	4	71.106		29399		16538
20271	-43	14345	7.33	K0	01 05.132	0.09	4	71.605	-43 17 05.33	0.24	4	71.605		29404		2509
20272	-51	12801	7.33	K0	01 05.781	0.15	4	70.719	-51 28 25.25	0.13	4	70.719		29405		2510
20273	-46	13822	7.14	F8	01 08.924	0.10	6	70.128	-46 27 15.63	0.11	6	70.128	3679	29409		33679
20274	-10	5584	8.3	K0	01 10.571	--	1	71.792	-10 06 09.09	--	1	71.792				16542
20275	-44	14270	9.16	G5	21 01 11.316	0.17	4	70.858	-44 39 38.88	0.21	4	70.858		29411		2511
20276	-29	17521	8.1	F8	01 11.988	0.26	3	70.031	-29 20 49.25	0.11	3	70.031				16543
20277	-74	1956	9.0	K2	01 18.768	0.25	4	71.230	-73 59 26.95	0.23	4	71.230				20243
20278	-28	17089	8.53	K0	01 22.311	0.11	3	69.912	-27 43 51.07	0.21	3	69.912		29415		16544
20279	-56	9587	8.9	K0	01 22.416	0.13	4	71.129	-56 19 13.62	0.11	4	71.129				16545
20280	-60	7445	8.38	K0	21 01 30.052	0.11	4	71.195	-60 36 09.01	0.14	4	71.195		29418		16546
20281	-27	15222	8.1	A2	01 31.029	0.05	4	71.075	-26 56 04.30	0.11	4	71.075				16547
20282	-55	9509	5.20	K0	01 34.322	0.07	6	70.064	-54 55 35.93	0.15	5	69.995	3680	29420	4656	33680
20283	+ 3	4493	8.5	G5	01 35.227	0.05	2	71.545	+ 3 46 57.82	0.04	2	71.545		29421		16548
20284	-69	3155	7.78	K5	01 56.447	0.22	4	70.682	-68 50 46.89	0.28	4	70.682		29425		20244
20285	-33	15379	7.7	G0	21 02 01.124	0.29	4	70.404	-33 01 33.83	0.16	4	70.404				16549
20286	- 9	5650	8.5	G5	02 03.933	0.01	2	70.775	- 8 58 44.89	0.22	2	70.775				16550
20287	-45	14182	8.8	K0	02 04.570	0.12	5	70.840	-44 55 26.87	0.15	5	70.840				2512
20288	-50	13231	9.2	F5	02 04.871	0.12	5	71.571	-50 20 40.32	0.26	5	71.571				2513
20289	-26	15408	9.0	K0	02 05.526	0.32	3	71.362	-26 21 44.58	0.09	3	71.362				16551
20290	+ 2	4296	8.3	A0	21 02 10.874	0.37	2	72.104	+ 2 35 00.32	0.22	2	72.104				16552
20291	+ 1	4418	6.42	G5	02 13.173	0.05	6	71.163	+ 2 04 13.65	0.11	6	71.163	3681	29435		33681
20292	-58	7806	7.9	K0	02 14.808	0.04	4	70.290	-57 47 34.22	0.22	4	70.290				16553
20293	-30	18374	9.2	F8	02 26.374	0.09	3	70.328	-30 30 26.62	0.10	3	70.328				16554
20294	-36	14593	8.6	K5	02 30.307	0.14	4	70.794	-36 33 16.63	0.20	4	70.794				16555
20295	-52	11821	8.7	F5	21 02 30.340	0.08	4	70.363	-52 34 45.50	0.17	4	70.363				16556
20296	+ 0	4657	8.0	F0	02 45.958	0.07	2	71.467	+ 0 31 36.20	0.07	2	71.467				16557
20297	-55	9513	7.46	F2	02 50.436	0.09	4	70.674	-55 09 26.34	0.14	4	70.674		29444		16558
20298	- 4	5355	7.29	K5	02 54.605	--	1	71.617	- 4 33 45.02	--	1	71.617		29448		16559
20299	-79	1133	8.13	F5	02 54.886	0.19	4	69.524	-79 28 34.57	0.04	4	69.524		29449		20245
20299	SP				21 02 54.907	0.13	4	69.084	-79 28 34.73	0.31	4	69.084		29449		20245
20300	-30	18382	5.71	K0	03 00.308	0.09	6	69.772	-30 19 30.79	0.11	6	69.772	3683	29453		33683
20301	-46	13832	8.0	G5	03 01.163	0.08	4	71.440	-45 47 31.38	0.06	3	71.651				2514
20302	-17	6174	4.19	A0	03 08.427	0.05	28	71.095	-17 25 59.15	0.07	28	71.095	1552	29460	4659	31552
20303	-31	18061	8.4	K0	03 10.704	0.05	4	70.647	-31 14 13.05	0.13	4	70.647				16560

20270 A 14584, 8.4m-8.7m, 0°1, 303°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
20304	-41	14379	5.56	K0	21 03 10.745	0.08	6	70.598	-41 35 12.88	0.15	6	70.598	3684	29461	4660	33684
20305	-59	7672	9.1	K2	03 18.798	0.13	3	69.344	-59 15 03.56	0.12	3	69.344				16561
20306	-41	14381	8.18	F8	03 22.226	0.26	4	70.567	-41 35 07.72	0.11	4	70.567		29467		2515
20307	-6	5672	8.7	G0	03 29.438	--	1	70.743	-6 20 25.97	--	1	70.743				16562
20308	-60	7451	6.76	G5	03 30.888	0.13	6	70.991	-60 11 36.26	0.08	6	70.991	3685	29471	4662	33685
20309	-12	5907	8.4	K0	21 03 46.800	--	1	71.529	-12 09 23.41	--	1	71.529				16563
20310	-69	3156	8.3	F0	03 49.371	0.17	4	69.641	-69 26 08.32	0.42	4	69.641				20246
20311	-20	6127	6.68	K0	03 50.736	0.07	5	71.121	-20 22 53.17	0.08	4	70.546		29476		16564
20312	-46	13838	9.4	K0	03 50.917	0.09	4	71.790	-45 49 53.00	0.13	4	71.790				2516
20313	-14	5932	8.3	K0	03 52.764	--	1	71.557	-13 42 19.84	--	1	71.557				16565
20314	-35	14575	8.9	K2	21 03 54.015	0.13	4	70.554	-35 15 30.56	0.10	4	70.554				16566
20315	-0	4161	7.10	K2	03 59.451	0.03	80	70.847	-0 18 22.98	0.03	79	70.815	1553	29480	4663	81553
20316	-38	14386	8.3	K0	04 04.832	0.10	4	70.891	-38 14 58.15	0.04	4	70.891				16567
20317	-39	14115	8.8	K0	04 09.079	0.08	5	70.832	-39 27 48.71	0.12	5	70.832				16568
20318	-23	16700	6.96	F5	04 09.875	0.09	3	70.207	-23 21 02.44	0.14	3	70.207		29488	4664	16569
20319	-1	4105	8.2	K5	21 04 11.259	--	1	71.655	-1 13 35.93	--	1	71.655				16570
20320	-25	15235	4.60	M0	04 12.364	0.09	13	70.143	-25 12 25.78	0.06	13	70.143	791	29490	4666	30791
20321	+26	4073	6.23	K2	04 12.919	0.11	4	71.604	+26 43 23.67	0.12	4	71.604	3686	29491	4667	33686
20322	-44	14296	7.71	K2	04 18.659	0.14	4	70.836	-44 29 37.37	0.03	4	70.836		29495		2517
20323	+3	4503	8.7	K2	04 24.630	--	1	71.502	+3 53 06.51	--	1	71.502				16571
20324	-8	5576	8.7	K2	21 04 27.226	--	1	71.540	-7 57 15.29	--	1	71.540				16572
20325	-21	5928	8.6	K0	04 28.714	0.04	4	70.002	-20 42 06.53	0.08	4	70.002				16573
20326	-42	15253	9.5	K0	04 31.191	0.12	4	70.453	-42 26 50.81	0.09	4	70.453				2518
20327	-19	6024	6.78	G5	04 40.073	0.35	2	72.153	-19 17 23.47	0.11	2	72.153		29510		16574
20328	-37	14121	8.30	K0	04 40.752	0.21	5	71.752	-37 27 58.98	0.15	5	71.752		29511		16575
20329	-34	14872	7.9	K0	21 04 44.106	0.06	4	70.549	-34 24 01.93	0.06	4	70.549				16576
20330	-8	5581	6.88	A0	04 45.811	--	1	71.480	-8 26 12.36	--	1	71.480		29515		16577
20331	+3	4504	7.9	F8	04 48.522	--	1	71.554	+3 56 23.46	--	1	71.554		29518		16578
20332	-66	3520	7.7	A2	04 49.193	0.15	4	69.901	-66 00 04.73	0.05	4	69.901				20247
20333	-53	9995	8.7	K2	04 53.330	0.08	4	70.032	-53 28 09.17	0.17	4	70.032				16579
20334	-18	5862	6.03	A0	21 04 56.305	--	1	71.617	-17 39 28.08	--	1	71.617		29520		16580
20335	-0	4163	6.82	M3	04 58.876	0.07	2	71.962	-0 21 56.75	0.46	2	71.962		29522		16581
20336	-61	6530	8.39	K2	05 04.419	0.15	4	70.104	-61 16 29.93	0.15	5	70.360		29524		16582
20337	-2	5456	6.77	A3	05 06.815	--	1	71.516	-2 15 16.27	--	1	71.516		29527		16583
20338	-16	5800	7.64	K5	05 11.569	--	1	71.521	-15 49 33.38	--	1	71.521		29528		16584
20339	+15	4340	6.52	K0	21 05 12.542	0.13	6	70.434	+15 27 25.02	0.15	6	70.434	3689	29530	4671	33689
20340	-72	2582	9.2	K0	05 12.893	0.11	4	69.660	-72 48 51.19	0.19	4	69.660				20248
20341	+0	4663	6.87	K5	05 16.257	--	1	71.535	-0 57 05.86	--	1	71.535		29532		16585
20342	-73	2194	8.8	K2	05 25.865	0.13	4	69.167	-73 03 27.44	0.21	4	69.167				20249
20343	-34	14879	8.1	K0	05 27.930	0.10	4	71.005	-33 44 06.76	0.14	4	71.005				16586
20344	-13	5857	8.0	K2	21 05 31.096	--	1	71.510	-13 05 00.39	--	1	71.510				16587
20345	-27	15266	8.6	K0	05 31.567	0.22	4	71.162	-26 42 09.15	0.25	4	71.162				16588
20346	-1	4111	6.79	A5	05 34.637	0.05	2	71.733	-1 11 32.44	0.10	2	71.733		29540		16589
20347	-51	12830	9.0	K0	05 34.961	0.29	4	69.932	-50 52 23.02	0.25	4	69.932				2519
20348	-24	16488	7.38	K2	05 37.567	0.13	4	70.239	-24 24 28.39	0.12	4	70.239		29542		16590
20349	-21	5933	5.27	A0	21 05 41.963	0.05	6	70.397	-21 23 45.82	0.03	6	70.397	3690	29543	4672	33690
20350	-45	14215	8.0	G5	05 42.146	0.08	4	71.050	-45 12 53.60	0.12	4	71.050				2520
20351	-30	18409	8.2	K0	05 43.703	0.12	4	70.837	-29 44 11.05	0.21	4	70.837				16591
20352	-47	13708	8.0	M1	05 49.659	0.08	4	70.166	-46 58 16.27	0.15	4	70.166				2521
20353	-43	14391	8.5	A0	05 50.488	0.16	4	70.860	-43 28 43.33	0.08	4	70.860				2522
20354	-28	17136	6.95	G5	21 05 59.665	0.17	4	70.443	-28 40 47.20	0.18	4	70.443		29546	4673	16592
20355	-64	4096	6.91	A2	05 59.688	0.11	6	69.764	-64 13 43.15	0.19	6	69.764	3691	29547		33691
20356	+6	4754	6.38	K5	05 59.908	0.11	6	69.485	+6 47 10.91	0.09	6	69.485	3692	29548	4674	33692
20357	-19	6028	8.8	K0	06 00.556	0.16	2	70.747	-18 55 48.85	0.03	2	70.747				16593
20358	-3	5123	8.6	K2	06 03.839	0.40	2	70.129	-2 56 23.09	0.13	2	70.129				16594
20359	-39	14128	8.5	K5	21 06 04.459	0.09	5	70.225	-39 01 45.98	0.15	5	70.225				16595
20360	-31	18087	8.6	F5	06 04.984	0.09	5	71.180	-31 03 59.47	0.32	4	70.620				16596
20361	-27	15275	7.5	K2	06 09.823	0.12	4	70.045	-27 18 39.49	0.07	4	70.045				16597
20362	-6	5689	7.8	A3	06 17.126	0.00	2	71.574	-6 31 58.08	0.09	2	71.574			4675	16598
20363	-32	16426	7.7	K0	06 19.207	0.22	4	70.062	-32 13 37.87	0.17	4	70.062				16599
20364	-85	516	6.97	K0	21 06 21.556	0.31	4	69.689	-85 24 29.17	0.23	4	69.689		29557		20250
20364 SP					06 21.076	0.10	4	69.618	-85 24 29.20	0.10	4	69.618		29557		20250
20365	-77	1483	8.6	K0	06 34.866	0.07	4	69.505	-77 08 20.27	0.13	4	69.505				20251
20365 SP					06 34.805	0.07	4	69.149	-77 08 20.10	0.20	4	69.149				20251
20366	-17	6193	6.88	K2	06 37.582	0.14	2	72.094	-16 49 10.50	0.47	2	72.094		29566		16600
20367	-5	5483	8.5	A0	21 06 40.359	--	1	72.686	-5 09 23.80	--	1	72.686				16601
20368	-21	5940	6.15	F0	06 41.801	0.08	4	69.992	-20 45 33.37	0.13	4	69.992		29567		16602
20369	-4	5372	7.8	G0	06 42.262	0.28	2	72.128	-4 05 46.71	0.40	2	72.128				16603
20370	-14	5946	8.0	K2	06 49.748	0.20	3	72.239	-14 19 14.54	0.10	3	72.239				16604
20371	-11	5538	4.52	K0	06 52.442	0.03	66	71.757	-11 34 31.37	0.04	66	71.757	794	29571	4678	30794
20372	-83	709	7.58	K0	21 06 56.073	0.25	4	69.858	-83 28 20.26	0.17	4	69.858		29574		20252
20372 SP					06 55.988	0.16	4	69.609	-83 28 20.84	0.39	4	69.609		29574		20252
20373	-64	4100	8.6	F5	06 57.884	0.09	4	69.914	-63 53 20.71	0.07	4	69.914				16605
20374	-48	13805	9.3	G5	07 03.417	0.07	4	69.601	-48 31 23.43	0.13	4	69.601				2523
20375	-31	18098	7.9	G5	07 09.200	0.05	4	68.936	-31 41 44.92	0.10	4	68.936				16606

20330 A 14648AB, 7.5m-7.8m, 0°3, 271°.

CATALOG OF 23,001 STARS FOR 1950.0

517

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
20376	-40 14200	8.8	K0	21 07 24.917	0.34	4	70.538	-40 34 47.98	0.07	4	70.538				2524
20377	+ 1 4435	8.8	K5	07 27.894	0.03	2	70.964	+ 1 35 39.35	0.04	2	70.964				16607
20378	-22 15233	7.28	G5	07 37.933	0.12	4	70.233	-22 40 55.48	0.23	4	70.233		29586		16608
20379	-66 3527	8.6	G5	07 39.013	0.16	4	68.939	-66 29 17.65	0.23	4	68.939				20253
20380	-70 2834	8.08	K5	07 39.336	0.09	4	69.880	-70 22 00.26	0.22	4	69.880		29587		20254
20381	-18 5875	7.9	K0	21 07 43.553	0.10	2	70.766	-18 32 06.90	0.10	2	70.766				16609
20382	-57 9807	6.91	K0	07 51.827	0.16	6	70.256	-56 43 19.59	0.10	6	70.256	3695	29590	4679	33695
20383	+ 9 4732	4.76	F0p	07 54.636	0.07	13	70.558	+ 9 55 41.77	0.09	13	70.558	1555	29591	4680	31555
20384	-36 14645	8.9	G5	08 01.928	0.07	4	70.587	-36 06 59.68	0.09	4	70.587				16610
20385	-10 5619	8.6	G5	08 02.256	0.03	2	71.560	-10 24 50.98	0.18	2	71.560				16611
20386	-35 14617	9.2	G0	21 08 02.895	0.08	4	70.561	-35 11 55.37	0.07	4	70.561				16612
20387	-52 11828	8.9	K0	08 03.794	0.18	4	69.890	-52 22 04.70	0.31	4	69.890				16613
20388	-12 5926	8.0	K2	08 04.883	0.04	2	71.935	-11 56 02.14	0.34	2	71.935				16614
20389	- 9 5674	6.51	K0	08 05.385	0.30	2	71.722	- 9 33 30.40	0.01	2	71.722		29593		16615
20390	-49 13367	8.0	K2	08 13.034	0.24	4	70.094	-48 58 43.26	0.10	4	70.094				2525
20391	-26 15475	8.4	G5	21 08 14.479	0.06	4	69.922	-26 41 13.93	0.06	4	69.922				16616
20392	+ 3 4514	7.9	K2	08 32.294	0.13	2	70.109	+ 3 42 52.70	0.11	2	70.109				16617
20393	-67 3778	9.2	K2	08 34.655	0.07	4	69.764	-67 08 05.89	0.30	4	69.764				20255
20394	-70 2835	5.08	M0	08 41.480	0.03	82	70.918	-70 19 56.16	0.04	82	70.918	1554	29606	4681	31554
20395	-64 4104	8.3	K0	08 45.856	0.14	4	70.306	-64 19 36.34	0.13	4	70.306				20256
20396	-15 5908	6.44	A5	21 08 55.753	0.06	3	72.226	-14 40 40.25	0.19	3	72.226		29612		16618
20397	-48 13818	9.0	K0	09 02.793	0.22	4	70.111	-48 06 52.87	0.39	4	70.111				2526
20398	+ 0 4679	8.7	A0	09 05.908	0.07	2	72.132	+ 0 28 21.23	0.05	2	72.132				16619
20399	-24 16518	8.1	A0	09 08.601	0.06	4	69.582	-24 19 38.26	0.07	4	69.582				16620
20400	-28 17166	7.77	K2	09 19.808	0.12	4	70.093	-28 06 37.26	0.14	4	70.093		29623		16621
20401	-39 14151	8.5	K0	21 09 29.574	0.13	4	71.091	-38 53 17.63	0.04	4	71.091				16622
20402	+ 1 4441	8.2	K2	09 32.191	0.19	2	72.172	+ 1 25 40.44	0.11	2	72.172				16623
20403	- 8 5603	8.8	K0	09 37.091	--	1	71.557	- 8 33 46.62	--	1	71.557				16624
20404	-21 5959	8.5	K0	09 45.658	0.16	4	70.677	-21 13 05.42	0.15	4	70.677				16625
20405	-55 9540	7.14	K0	09 54.639	0.12	4	70.244	-55 11 43.50	0.09	4	70.244		29642		16626
20406	+ 1 4443	8.4	K2	21 09 57.215	--	1	71.642	+ 2 08 52.97	--	1	71.642				16627
20407	-60 7454	8.7	K0	09 58.037	0.08	4	69.392	-60 33 27.00	0.06	4	69.392				16628
20408	-50 13271	8.0	G5	10 00.831	0.10	4	70.797	-50 00 05.68	0.11	4	70.797				2527
20409	-46 13872	9.0	G5	10 02.827	0.10	4	70.351	-45 51 01.75	0.07	4	70.351				2528
20410	-48 13825	6.95	M0	10 06.546	0.14	4	70.396	-47 45 27.22	0.07	4	70.396		29644		2529
20411	- 7 5512	8.2	G5	21 10 07.951	--	1	71.669	- 7 21 46.21	--	1	71.669		29646		16629
20412	-35 14637	9.3	G0	10 09.886	0.07	4	70.741	-34 41 49.89	0.23	4	70.741				16630
20413	+ 2 4319	7.00	A2	10 13.558	--	1	71.658	+ 2 26 11.06	--	1	71.658		29649		16631
20414	-28 17178	5.55	K5	10 19.815	0.03	78	71.171	-27 49 30.69	0.04	76	71.139	1556	29652	4687	81556
20415	-25 15304	7.52	K2	10 24.205	0.11	4	69.654	-25 03 09.15	0.18	4	69.654		29654		16632
20416*	-59 7681	8.8	G0	21 10 29.378	0.09	5	71.991	-58 43 49.71	0.34	4	71.623				16633
20417	- 1 4123	7.8	K5	10 33.351	--	1	71.683	- 1 20 10.54	--	1	71.683				16634
20418	-56 9604	8.12	G5	10 34.629	0.18	4	71.121	-56 27 31.26	0.21	4	71.121		29657		16635
20419	-23 16774	8.1	F5	10 34.677	0.06	4	70.369	-22 45 09.62	0.21	4	70.369				16636
20420	-41 14430	8.8	G5	10 39.885	0.17	4	70.829	-40 54 54.05	0.06	4	70.829				2530
20421	-86 390	7.37	K5	21 10 46.571	0.27	4	70.011	-85 50 59.38	0.17	4	70.011		29660		20257
20422	- 6 5712	7.58	G5	10 46.564	0.02	4	70.098	-85 50 59.62	0.46	4	70.098		29660		20257
20423	-45 14262	7.80	K0	10 51.597	0.12	2	72.107	- 6 07 06.65	0.22	2	72.107		29662		16637
20424	-18 5886	8.2	K2	10 58.498	0.21	4	71.071	-44 41 56.55	0.11	4	71.071		29666		2531
20425	-40 14230	8.0	K2	10 59.465	0.34	2	70.624	-17 46 21.89	0.07	2	70.624				16638
20426	-20 6159	7.86	K0	21 11 06.517	0.28	4	71.166	-39 57 39.03	0.29	4	71.166				2532
20427	-59 7682	7.74	K0	11 07.179	0.09	4	70.498	-20 17 43.12	0.16	4	70.498		29672		16639
20428	-35 14647	8.36	A0	11 07.640	0.21	4	69.536	-59 31 10.45	0.21	4	69.536		29674		16640
20429	-11 5552	8.7	A5	11 08.949	0.14	4	71.612	-35 34 53.92	0.14	4	71.612		29675		16641
20430	-43 14431	7.92	K5	11 18.882	--	1	71.718	-11 23 20.63	--	1	71.718				16642
20431	-13 5881	8.0	K0	21 11 19.596	0.03	4	71.431	-42 53 26.69	0.12	4	71.431		29681		2533
20432	- 3 5155	8.3	K0	11 23.668	0.42	2	71.256	-12 40 26.26	0.02	2	71.256				16643
20433	-31 18144	8.3	G5	11 29.415	--	1	71.650	- 2 57 33.69	--	1	71.650				16644
20434	-37 14185	8.7	G0	11 30.799	0.12	4	70.837	-30 57 53.56	0.21	4	70.837				16645
20435	-82 850	8.14	A2	11 38.653	0.12	4	70.732	-37 21 23.39	0.25	4	70.732				16646
20436	-14 5973	8.6	K0	21 11 44.746	0.04	4	69.603	-82 24 55.85	0.15	4	69.603		29688		20258
20437	-72 2590	8.5	K5	11 44.932	0.18	4	69.632	-82 24 55.70	0.11	4	69.632		29688		20258
20438	-26 15501	8.7	G5	11 44.957	0.12	2	71.962	-14 21 15.37	0.48	2	71.962				16647
20439	-38 14455	9.0	K0	11 45.464	0.12	4	69.420	-72 26 58.35	0.15	4	69.420				20259
20440	+ 4 4631	7.5	K5	11 48.258	0.07	5	71.111	-26 21 07.11	0.20	5	71.111				16648
20441	-31 18149	7.3	G5	21 11 54.317	0.09	5	72.129	-38 38 36.00	0.18	4	71.806				16649
20442	-75 1695	8.4	K2	12 00.725	0.22	2	72.227	+ 4 28 54.73	0.23	2	72.227				16650
20443	-35 14659	8.5	G5	12 01.615	0.12	4	70.086	-31 11 27.63	0.09	4	70.086				16651
20444	+ 1 4449	8.8	K5	12 02.811	0.07	4	69.504	-75 14 29.08	0.12	4	69.504				20260
20445	-51 12876	8.5	F5	12 02.762	0.14	4	70.035	-75 14 29.24	0.16	4	70.035				20260
20446	-22 5635	7.23	K0	21 12 04.036	0.13	4	71.217	-35 12 53.88	0.15	4	71.217				16652
20447	-53 10015	5.84	A5	12 04.552	0.14	4	70.194	-51 13 14.88	0.30	4	70.194				2534
				12 07.462	--	1	71.754	+ 1 32 20.64	--	1	71.754				16653
				12 11.471	0.10	4	69.592	-22 01 24.54	0.14	4	69.592		29703		16654
				12 12.410	0.02	101	70.976	-53 28 17.47	0.04	103	70.984	796	29704	4694	30796

20416 SDS, 9.1m-9.5m, 0°4, 18°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
20448	-8	5611	8.8	F8	21 12 14.659	0.01	2	72.210	-7 55' 42.77	0.35	2	72.210				16655
20449	-18	5893	8.8	K0	12 20.390	0.15	2	72.024	-18 18 43.77	0.28	2	72.024				16656
20450	-33	15472	9.0	F5	12 20.513	0.14	4	70.361	-33 13 41.24	0.24	4	70.361				16657
20451	-36	14696	8.1	K0	12 22.829	0.06	5	70.532	-35 55 24.32	0.07	5	70.532				16658
20452	-36	14699	6.14	K0	12 40.414	0.10	6	69.164	-36 25 09.98	0.08	6	69.164	3696	29717	4697	33696
20453	-10	5630	8.8	K0	21 12 41.810	0.13	2	71.959	-10 33 24.38	0.12	2	71.959		29720		16659
20454	-16	5827	8.4	F0	12 48.318	0.12	2	72.120	-16 17 58.97	0.19	2	72.120				16660
20455	-75	1697	6.84	A0	12 52.934	0.09	6	69.719	-75 33 22.59	0.22	6	69.719	3697	29726		33697
20455	SP				12 52.946	0.07	6	69.622	-75 33 22.97	0.20	6	69.622	3697	29726		53697
20456	-53	10019	8.9	K0	12 54.333	0.22	4	70.580	-53 12 48.58	0.19	4	70.580				16661
20457	-0	4189	8.4	K0	21 12 56.813	--	1	72.525	-0 28 38.95	--	1	72.525				16662
20458	-29	17666	8.6	K0	12 58.676	0.07	4	69.919	-28 52 15.95	0.12	4	69.919				16663
20459	-9	5698	7.51	K0	13 07.984	0.09	2	71.948	-9 19 47.21	0.04	2	71.948		29729		16664
20460	-13	5891	6.52	K0	13 15.365	0.19	2	71.559	-13 24 40.35	0.19	2	71.559		29734		16665
20461	+4	4635	4.14	*	13 19.530	0.06	19	71.694	+5 02 22.52	0.06	18	71.599	800	29735	4698	30800
20462	+3	4532	8.7	K2	21 13 24.446	--	1	71.685	+3 29 14.59	--	1	71.685				16666
20463	-71	2599	9.0	K2	13 31.539	0.23	4	70.792	-71 13 06.05	0.24	4	70.792				20261
20464	-52	11842	9.0	K0	13 32.028	0.10	4	70.699	-52 19 00.70	0.05	4	70.699				16667
20465	-78	1386	9.0	K5	13 40.143	0.12	4	69.842	-78 37 02.97	0.17	4	69.842				20262
20465	SP				13 40.085	0.11	4	70.098	-78 37 02.92	0.12	4	70.098				20262
20466	-58	7828	8.2	K0	21 13 46.820	0.11	4	70.737	-57 45 37.74	0.17	4	70.737				16668
20467	-54	9835	7.47	K0	13 47.893	0.09	4	70.374	-54 13 37.08	0.23	4	70.374		29746		16669
20468	-61	6536	8.31	K2	13 48.802	0.34	4	71.291	-61 11 45.25	0.14	4	71.291		29748		16670
20469	-15	5938	8.0	A0	13 50.381	0.23	2	70.596	-15 01 57.35	0.13	2	70.596			4701	16671
20470	-49	13408	8.5	K5	13 53.695	0.17	4	70.715	-48 55 01.61	0.16	4	70.715				2535
20471	-48	13848	8.3	F5	21 13 58.377	0.15	4	71.010	-48 16 44.67	0.13	4	71.010				2536
20472	-50	13295	8.8	K0	14 11.540	0.08	4	70.828	-50 18 40.39	0.10	4	70.828				2537
20473	-32	16491	8.6	G5	14 15.208	0.05	4	70.551	-32 05 39.55	0.25	4	70.551				16672
20474	-39	14187	8.7	K2	14 16.215	0.10	5	70.427	-38 58 29.94	0.07	5	70.427				16673
20475	-76	1496	8.1	K2	14 18.467	0.20	4	70.537	-76 03 24.82	0.16	4	70.537				20263
20475	SP				21 14 18.608	0.09	4	69.999	-76 03 24.29	0.43	4	69.999				20263
20476	-22	5647	8.3	K0	14 24.535	0.12	4	70.326	-22 17 06.41	0.07	4	70.326				16674
20477	+0	4697	8.6	K0	14 25.126	--	1	71.642	+0 48 58.89	--	1	71.642				16675
20478	-1	4138	8.6	K0	14 27.151	--	1	71.713	-1 17 13.86	--	1	71.713				16676
20479	-49	13412	6.70	K0	14 28.722	0.03	57	71.381	-48 55 40.35	0.05	55	71.306	1557	29764	4702	31557
20480	-4	5404	8.3	K0	21 14 33.521	0.04	2	72.059	-4 26 58.88	0.62	2	72.059				16677
20481	-34	14962	8.4	F8	14 38.185	0.08	4	70.562	-34 12 27.64	0.07	4	70.562				16678
20482	-42	15352	8.5	K0	14 38.356	0.15	4	70.353	-42 15 24.86	0.16	4	70.353				2538
20483	+3	4538	7.9	K2	14 41.251	--	1	70.721	+3 42 07.95	--	1	70.721				16679
20484	-27	15357	8.0	K0	14 42.819	0.16	4	69.409	-26 41 41.64	0.16	4	69.409				16680
20485	-66	3543	9.1	G0	21 14 44.082	0.11	4	70.067	-66 35 06.45	0.13	4	70.067				20264
20486	-32	16498	4.79	A0	14 54.739	0.04	59	70.951	-32 22 58.22	0.05	60	70.982	801	29774	4703	30801
20487	-6	5729	8.5	K5	14 56.891	--	1	70.702	-5 40 42.29	--	1	70.702				16681
20488	-45	14294	7.64	A0	15 07.431	0.06	4	70.426	-45 30 03.44	0.02	4	70.426		29779		2539
20489	-22	5654	9.0	F8	15 09.210	0.10	4	70.114	-22 15 20.57	0.07	4	70.114				16682
20490	-19	6065	8.7	F8	21 15 22.761	--	1	71.688	-18 53 53.39	--	1	71.688				16683
20491	-18	5904	6.31	A5	15 27.992	--	1	71.639	-17 40 22.90	--	1	71.639		29788		16685
20492	-0	4195	8.5	K2	15 28.366	0.11	2	72.221	-0 02 51.58	0.28	2	72.221		29787		16684
20493	-62	6220	9.02	G5	15 28.555	0.29	4	70.326	-62 21 50.69	0.23	4	70.326		29790		16686
20494	-51	12891	9.1	F5	15 28.751	0.28	4	70.599	-51 23 23.07	0.28	4	70.599				2540
20495	-2	5499	7.9	K2	21 15 29.128	--	1	71.685	-2 21 08.80	--	1	71.685				16687
20496	-5	5512	6.68	B8	15 33.740	0.11	6	69.106	-4 43 49.43	0.14	6	69.106	3698	29793		33698
20497	-20	6178	5.69	K0	15 36.162	0.14	3	70.867	-20 32 46.32	0.23	3	70.867		29794		16688
20498	-69	3163	7.9	K5	15 37.418	0.26	4	70.015	-69 13 21.20	0.15	4	70.015				20265
20499	-25	15347	8.7	G0	15 39.463	0.12	4	70.427	-25 14 09.91	0.16	4	70.427				16689
20500	-33	15503	8.9	K0	21 15 50.735	--	1	69.532	-33 15 26.08	--	1	69.532				16690
20501	-24	16569	8.6	F0	15 51.569	0.06	3	70.407	-24 01 08.22	0.06	3	70.407				16691
20502	-49	13423	7.78	K0	15 59.542	0.25	4	70.292	-49 36 35.43	0.13	4	70.292		29806		2541
20503	-54	9846	8.9	K0	16 00.263	0.07	4	70.087	-53 49 24.86	0.21	4	70.087				16692
20504	-3	5172	8.5	K0	16 01.055	--	1	71.650	-3 20 35.95	--	1	71.650				16693
20505	-55	9559	8.1	F2	21 16 01.364	0.03	4	69.695	-54 46 14.14	0.08	4	69.695				16694
20506	-7	5536	8.2	K0	16 13.328	--	1	71.538	-6 39 01.63	--	1	71.538				16695
20507	-21	5988	8.6	G5	16 14.594	0.09	5	71.835	-21 29 24.00	0.11	3	70.769				16696
20508	-40	14280	8.8	G5	16 26.275	0.07	4	70.388	-39 41 17.58	0.08	4	70.388				16697
20509	+10	4516	6.32	K5	16 26.736	0.09	6	69.656	+10 59 30.43	0.20	6	69.656	3700	29821	4709	33700
20510	-87	305	8.3	K5	21 16 26.893	0.06	4	69.842	-87 24 16.13	0.13	4	69.842				20266
20510	SP				16 26.560	0.12	4	69.604	-87 24 16.12	0.34	4	69.604				20266
20511	-16	5840	6.93	K0	16 28.432	0.08	2	70.622	-16 23 27.27	0.20	2	70.622		29822		16698
20512	-35	14708	9.1	K0	16 34.136	0.12	5	70.460	-34 45 41.20	0.08	4	70.404				16699
20513*	-10	5644	8.6	F5	16 34.178	0.07	2	71.539	-9 47 25.86	0.31	2	71.539				16700
20514	-40	14285	9.0	K5	21 16 35.374	0.15	4	70.524	-40 16 05.63	0.09	4	70.524				2542
20515	+1	4461	8.6	A5	16 37.450	0.19	2	72.056	+1 52 33.18	0.64	2	72.056				16701
20516	-24	16576	8.4	K0	16 38.617	0.21	4	70.857	-23 59 00.54	0.12	4	70.857				16702
20517	-56	9623	8.1	K5	16 38.855	0.07	4	70.701	-56 00 11.13	0.09	4	70.701				16703
20518	-67	3788	8.9	K5	16 40.811	0.06	4	69.686	-67 19 53.84	0.26	4	69.686				20267

20461 F8+A3.

20513 9.0m-9.0m, 0°2, 100°.

CATALOG OF 23,001 STARS FOR 1950.0

519

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
20519	-17	6237	9.0	A0	21 16 49.791	0.27	2	71.554	-16 59 19.49	0.34	2	71.554				16704
20520	-47	13769	8.5	F0	17 00.912	0.04	4	70.057	-47 30 36.87	0.14	4	70.057				2543
20521	-14	5997	6.95	A0	17 03.911	0.19	2	71.267	-14 13 46.31	0.03	2	71.267	29840			16705
20522	-62	6223	8.5	K0	17 03.948	0.11	4	69.551	-62 33 43.39	0.16	4	69.551				16706
20523	-37	14222	8.8	F2	17 13.964	0.07	4	70.589	-37 00 02.78	0.08	4	70.589				16707
20524	-13	5910	8.43	K5	21 17 18.119	0.25	2	70.766	-13 11 55.14	0.12	2	70.766		29844		16708
20525	-41	14475	4.92	A2p	17 34.280	0.03	67	71.372	-41 01 19.76	0.04	67	71.372	802	29854	4713	30802
20526	-39	14212	7.8	G5	17 38.079	0.18	4	71.066	-38 59 40.21	0.14	4	71.066				16709
20527	-64	4124	7.6	M1	17 41.908	0.15	4	71.365	-64 37 22.07	0.19	4	71.365				20268
20528	-2	5507	8.3	G5	17 43.728	0.28	2	71.957	-1 43 03.24	0.34	2	71.957				16710
20529	-69	3169	8.3	K2	21 17 47.522	0.07	4	69.939	-68 51 18.54	0.18	4	69.939				20269
20530	-50	13324	8.2	K0	17 49.197	0.22	4	69.257	-50 13 23.18	0.09	4	69.257				2544
20531	-22	5668	8.0	G5	17 50.289	0.10	4	69.618	-22 35 58.47	0.09	4	69.618				16711
20532	-31	18209	7.5	K0	17 53.273	0.03	3	70.129	-31 10 05.20	0.11	3	70.129				16712
20533	-32	16534	8.8	G5	17 57.597	0.13	4	71.588	-32 14 10.34	0.21	4	71.588				16713
20534	+0	4708	8.2	G5	21 17 58.686	0.22	2	72.131	+1 01 19.98	0.04	2	72.131				16714
20535	-11	5578	8.2	K0	18 06.579	0.32	2	72.160	-11 33 44.62	0.21	2	72.160				16715
20536	-41	14480	8.0	M0	18 07.964	0.17	4	71.113	-41 34 05.13	0.23	4	71.113				2545
20537	-9	5715	8.0	K2	18 09.287	--	1	71.685	-9 21 51.95	--	1	71.685	29870			16716
20538	-35	14723	9.1	K2	18 09.498	0.06	5	71.760	-35 38 52.47	0.14	4	71.346				16717
20539	-21	5992	7.08	F2	21 18 12.881	0.12	4	70.466	-21 02 01.16	0.10	4	70.466	29872			16718
20540	-43	14494	8.0	K2	18 16.700	0.06	4	70.388	-43 09 52.84	0.19	4	70.388				2546
20541	-46	13921	9.0	K0	18 20.986	0.12	4	70.519	-46 20 08.20	0.10	4	70.519				2547
20542	-20	6192	8.7	A0	18 34.134	--	1	71.655	-19 44 27.80	--	1	71.655				16719
20543	-60	7468	7.79	K2	18 34.989	0.11	4	69.853	-60 04 38.23	0.22	4	69.853	29878			16720
20544	-36	14752	9.0	G5	21 18 42.369	0.05	5	70.431	-36 37 50.93	0.07	4	70.368				16721
20545	-15	5958	8.4	K0	18 44.184	0.20	2	72.045	-15 22 09.51	0.20	2	72.045				16722
20546	-30	18537	8.8	M1	18 45.063	0.07	4	70.420	-30 21 43.40	0.14	4	70.420				16723
20547	+23	4294	5.82	K0	18 48.972	0.08	6	69.462	+23 38 37.72	0.19	6	69.462	3704	29884		33704
20548	-29	17721	6.70	K0	18 51.267	0.15	4	70.259	-29 22 46.09	0.17	4	70.259	29885			16724
20549	-38	14511	9.2	F0	21 18 53.146	0.25	4	70.159	-37 46 04.76	0.16	4	70.159				16725
20550	-19	6081	8.2	G0	18 55.781	--	1	71.718	-18 56 55.55	--	1	71.718				16726
20551	-5	5529	8.0	K2	19 02.501	--	1	71.789	-4 42 00.68	--	1	71.789				16727
20552	-56	9631	8.5	K2	19 02.735	0.01	4	70.220	-56 22 58.11	0.11	4	70.220				16728
20553	-3	5184	8.6	K0	19 10.231	--	1	71.737	-3 24 46.75	--	1	71.737				16729
20554	+2	4347	7.9	G5	21 19 13.153	--	1	71.759	+2 51 51.85	--	1	71.759				16730
20555	-44	14432	8.81	G5	19 15.620	0.18	4	70.060	-44 21 33.03	0.18	4	70.060	29897			2548
20556	-8	5634	8.2	K0	19 16.400	--	1	70.721	-7 44 04.76	--	1	70.721				16731
20557	+0	4714	6.82	F2	19 17.407	--	1	71.674	+1 08 52.74	--	1	71.674	29899			16732
20558	-17	6245	4.30	K0	19 27.925	0.05	41	71.390	-17 02 54.79	0.05	40	71.338	1561	29903	4717	31561
20559	+3	4551	6.92	K0	21 19 31.070	0.18	2	71.151	+4 07 54.56	0.10	2	71.151	29904		4718	16733
20560	-81	954	8.13	G0	19 41.182	0.09	4	69.535	-80 53 54.11	0.05	4	69.535	29909			20270
20560	SP				19 41.129	0.14	4	69.082	-80 53 54.33	0.25	4	69.082	29909			20270
20561	-58	7837	8.6	K5	19 43.595	0.11	4	69.607	-57 53 02.61	0.20	4	69.607				16734
20562	+19	4691	4.27	K0	19 46.504	0.03	80	71.011	+19 35 24.16	0.04	78	70.975	804	29914	4719	80804
20563	+4	4656	8.6	G5	21 19 48.425	0.05	2	72.162	+4 48 34.37	0.00	2	72.162				16735
20564	+2	4348	6.56	F8	20 04.194	0.23	2	72.115	+2 42 15.23	0.15	2	72.115	29920			16736
20565	-65	3914	8.3	K5	20 04.268	0.20	4	69.439	-65 00 50.63	0.21	4	69.439				20271
20566	-28	17247	8.4	A5	20 06.533	0.21	4	69.126	-28 18 48.82	0.06	4	69.126				16737
20567	-4	5438	8.4	K0	20 12.875	--	1	71.521	-3 45 39.24	--	1	71.521	29924			16738
20568	-9	5728	6.24	K5	21 20 15.467	0.07	6	69.358	-9 32 00.85	0.11	6	69.358	3705	29925		33705
20569	-6	5745	8.2	M0	20 20.650	--	1	71.560	-6 26 50.12	--	1	71.560				16739
20570	-73	2215	7.48	K0	20 34.756	0.08	4	70.111	-72 48 38.81	0.06	4	70.111	29935			20272
20571	-1	4158	7.7	K0	20 36.001	0.11	2	71.727	-0 59 15.33	0.18	2	71.727				16740
20572	-18	5922	9.0	F2	20 37.592	0.04	2	72.037	-18 30 04.94	0.21	2	72.037				16741
20573	+4	4658	9.0	K2	21 20 43.495	--	1	71.642	+4 57 12.95	--	1	71.642				16742
20574	-68	3419	8.8	G0	20 45.593	0.08	4	69.968	-67 50 18.60	0.52	4	69.968				20273
20575	-61	6549	8.20	K0	20 47.128	0.03	4	69.897	-61 24 09.89	0.24	4	69.897	29940			16743
20576	-12	5981	8.3	B8	20 58.906	0.21	2	71.733	-12 16 30.42	0.23	2	71.733				16744
20577	+13	4692	6.71	BSp	21 12.136	0.06	6	69.770	+13 50 06.52	0.11	6	69.770	3706	29947		33706
20578	+1	4471	8.0	K0	21 21 14.110	0.02	2	71.520	+1 27 56.60	0.05	2	71.520				16745
20579	-65	3916	8.4	K2	21 17.316	0.14	4	70.334	-65 29 19.93	0.07	4	70.334				20274
20580	-21	6007	5.47	K0	21 19.611	0.08	6	70.359	-21 03 58.35	0.13	6	70.359	3707	29953		33707
20581	-71	2605	7.8	K2	21 19.821	0.19	4	70.879	-70 56 01.64	0.23	4	70.879				20275
20582	-53	10060	8.7	K2	21 21.296	0.17	4	70.904	-52 56 34.19	0.06	4	70.904				16746
20583	-13	5923	5.54	A5	21 21 27.781	0.04	43	71.679	-13 05 37.08	0.04	42	71.637	1562	29957	4723	31562
20584	-42	15435	8.3	F8	21 34.551	0.10	4	69.995	-42 12 41.97	0.12	4	69.995				2549
20585	-16	5856	8.8	A0	21 34.737	0.22	2	71.958	-16 16 40.01	0.08	2	71.958				16747
20586	-55	9584	9.0	K0	21 35.298	0.32	4	70.662	-55 38 51.53	0.18	4	70.662				16748
20587	-64	4132	8.4	G5	21 38.430	0.16	4	70.578	-64 05 10.21	0.24	4	70.578				16749
20588	-59	7696	8.1	K0	21 40.112	0.15	4	70.296	-59 09 14.54	0.24	4	70.296				16750
20589	-45	14331	8.5	K0	21 50.439	0.12	4	70.514	-45 13 52.42	0.19	4	70.514				2550
20590	-46	13944	8.4	G5	22 10.614	0.20	4	70.546	-46 01 13.23	0.15	4	70.546				2551
20591	-8	5645	8.0	G0	22 16.437	0.35	2	72.132	-8 23 46.42	0.43	2	72.132				16751
20592	-26	15593	8.8	K5	22 16.833	0.08	4	69.621	-26 19 15.19	0.32	4	69.621				16752

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
20593	-42	15443	8.5	M1	21 22 16.867	0.08	3	70.586	-41 55 06.08	0.04	3	70.586				2552
20594	-80	1013	7.39	K0	22 19.322	0.15	4	70.903	-80 08 35.57	0.14	4	70.903		29978		20276
20594	SP				22 19.314	0.20	4	70.115	-80 08 35.58	0.06	4	70.115		29978		20276
20595	-65	3918	4.30	F8	22 20.415	0.04	33	70.920	-65 35 21.71	0.07	32	70.928	805	29979	4724	30805
20596	-58	7841	8.4	G5	22 25.709	0.08	4	71.331	-58 18 39.55	0.23	4	71.331				16753
20597	-24	16633	8.4	G5	21 22 27.782	0.06	4	70.734	-24 16 34.35	0.14	4	70.734				16754
20598	-14	6019	7.7	F5	22 28.767	0.29	2	72.209	-13 42 35.85	0.17	2	72.209				16755
20599	-39	14244	9.2	G8	22 30.844	0.11	4	70.387	-39 24 11.78	0.16	4	70.387				16756
20600	-2	5533	8.1	A3	22 31.749	0.12	2	72.045	-2 12 17.66	0.09	2	72.045		29987		16757
20601	-10	5668	5.76	A2	22 31.919	0.24	2	72.045	-9 57 48.83	0.21	2	72.045		29988		16758
20602	-53	10064	8.5	K5	21 22 34.015	0.10	4	71.399	-53 21 29.19	0.07	4	71.399				16759
20603	-4	5446	5.69	K0	22 40.514	0.07	6	70.360	-3 46 21.12	0.10	6	70.360	3708	29993	4726	33708
20604	-55	9586	6.24	F0	22 42.263	0.10	12	71.072	-54 52 39.30	0.09	12	71.072	1563	29994	4727	31563
20605	-36	14794	7.74	K0	22 45.588	0.08	4	70.750	-36 03 11.12	0.20	4	70.750		29995		16760
20606	-30	18596	9.1	K0	22 45.728	0.09	4	70.795	-30 05 02.52	0.26	4	70.795				16761
20607	-73	2217	9.0	K0	21 22 53.666	0.15	3	70.706	-73 25 13.44	0.06	3	70.706				20277
20608	-25	15415	7.68	K0	22 54.635	0.01	4	70.299	-25 27 16.22	0.07	4	70.299		30000		16762
20609	-19	6094	7.9	K0	22 54.970	--	1	71.792	-18 48 13.81	--	1	71.792				16763
20610	-1	4165	8.8	G0	22 58.891	--	1	71.740	-1 12 06.59	--	1	71.740				16764
20611	-0	4214	8.3	K5	23 00.900	--	1	71.786	-0 26 54.30	--	1	71.786				16765
20612	-38	14550	8.6	K5	21 23 13.742	0.07	4	70.847	-38 14 03.43	0.12	4	70.847				16766
20613	-38	14551	5.69	K0	23 15.984	0.06	6	70.339	-38 02 46.85	0.08	6	70.339	3710	30007	4729	33710
20614	-45	14338	8.05	F8	23 20.498	0.28	4	71.316	-45 03 48.49	0.18	4	71.316		30010		2553
20615	-27	15440	8.8	G0	23 21.895	0.01	3	70.660	-27 23 10.20	0.14	3	70.660				16767
20616	-22	5685	8.1	K2	23 23.560	0.18	3	70.423	-22 02 49.75	0.19	3	70.423				16768
20617	-21	6016	7.27	K0	21 23 32.043	0.09	3	70.686	-21 12 58.34	0.08	3	70.686		30014		16770
20618	-29	17777	8.28	K2	23 45.742	0.18	3	70.726	-29 13 47.24	0.12	3	70.726		30017		16773
20619	-22	15388	3.86	G5p	23 48.923	0.05	27	70.567	-22 37 43.80	0.06	27	70.567	806	30020	4731	80806
20620	-35	14782	8.1	K0	23 49.469	0.18	4	71.256	-35 14 11.55	0.09	4	71.256				16774
20621	-51	12940	8.0	K2	23 51.609	0.05	4	69.635	-51 21 00.39	0.24	4	69.635				2554
20622	-34	15062	8.9	K0	21 23 52.162	0.10	4	71.305	-34 07 38.61	0.19	3	70.601				16775
20623	+0	4726	6.40	F5	23 54.781	0.12	7	70.622	+0 53 14.96	0.12	6	70.648	3711	30022		33711
20624	-48	13902	9.3	G0	24 12.625	0.08	3	70.730	-48 09 03.21	0.16	3	70.730				2555
20625	-37	14287	8.3	K5	24 17.032	0.08	3	71.074	-37 19 29.31	0.28	3	71.074				16779
20626*	-32	16572	8.3	G0	24 17.846	0.09	4	71.798	-32 35 19.43	0.29	4	71.798				16781
20627	-70	2850	5.3v	M3	21 24 19.055	0.12	6	70.789	-69 43 24.18	0.18	6	70.789	3712	30026	4733	33712
20628	-72	2606	8.8	K0	24 20.957	0.06	4	69.094	-71 45 29.06	0.19	4	69.094				20278
20629	-47	13817	9.0	K0	24 22.909	0.21	3	70.565	-47 05 02.43	0.07	3	70.565				2556
20630	-19	6099	8.7	K0	24 24.819	--	1	71.702	-19 31 46.19	--	1	71.702				16782
20631	-49	13478	8.5	G5	24 26.266	0.05	3	70.270	-49 28 51.86	0.22	3	70.270				2557
20632	-31	18276	7.8	K2	21 24 30.683	0.14	3	70.576	-31 03 49.85	0.18	3	70.576				16783
20633	-33	15576	8.2	K0	24 32.627	0.14	3	71.260	-33 05 32.35	0.10	3	71.260				16784
20634	-24	16654	8.1	K2	24 33.094	0.06	3	70.767	-23 50 01.71	0.20	3	70.767				16785
20635	-28	17287	7.51	K0	24 37.302	0.08	3	70.021	-27 56 45.85	0.10	3	70.021		30030		16787
20636	-39	14257	8.6	G5	24 39.613	0.20	4	70.716	-39 05 11.35	0.06	4	70.716				16788
20637	-20	6212	8.7	G0	21 24 41.197	0.19	3	69.909	-20 29 08.10	0.14	3	69.909				16789
20638	-7	5565	7.6	F8	24 44.265	0.08	2	72.099	-7 13 58.81	0.09	2	72.099				16791
20639	+15	4416	6.78	F8	24 44.927	0.12	6	71.721	+15 54 25.70	0.15	6	71.721	3713	30035		33713
20640	-44	14484	8.3	G5	24 52.094	0.03	4	70.823	-44 39 22.53	0.17	4	70.823				2558
20641	-8	5657	7.9	M0	25 05.080	0.11	2	72.254	-8 34 40.84	0.01	2	72.254				16792
20642	-3	5214	8.6	K0	21 25 18.536	--	1	71.699	-2 38 47.34	--	1	71.699		30043		16793
20643	-22	5691	7.89	G5	25 21.735	0.14	4	70.018	-21 56 32.89	0.05	4	70.018		30045		16794
20644	-12	6001	8.6	K2	25 22.400	--	1	71.677	-12 08 48.87	--	1	71.677		30046		16795
20645	-27	15459	7.5	K0	25 24.756	0.17	3	70.313	-26 45 22.13	0.22	3	70.313				16796
20646	+26	4164	5.38	A0	25 27.770	0.14	6	71.660	+27 23 24.55	0.21	6	71.660	3715	30048	4737	33715
20647	-75	1710	8.05	G5	21 25 34.637	0.18	4	70.243	-75 25 19.88	0.24	4	70.243		30052		20279
20647	SP				25 34.626	0.16	4	69.573	-75 25 20.10	0.22	4	69.573		30052		20279
20648	-24	16671	8.7	G5	25 36.334	0.04	4	70.405	-23 50 12.77	0.25	4	70.405				16797
20649	-3	5216	7.8	K2	25 43.086	0.07	2	72.162	-2 49 48.80	0.13	2	72.162		30055		16798
20650	-37	14299	7.6	K2	25 48.187	0.18	4	70.643	-37 37 22.26	0.19	4	70.643				16799
20651	+7	4696	6.66	M0	21 25 56.919	0.04	32	70.948	+7 58 37.48	0.04	31	70.964	1564	30060	4739	31564
20652	-83	716	6.52	B3	25 58.411	0.12	7	69.592	-82 54 14.14	0.23	6	69.447	3995	30062		33995
20652	SP				25 58.532	0.15	6	68.613	-82 54 14.23	0.21	6	68.613	3995	30062		53995
20653	-4	5458	8.8	K5	25 58.572	--	1	71.639	-4 22 55.58	--	1	71.639				16800
20654	-41	14530	9.0	M1	26 03.598	0.18	4	70.110	-41 38 06.03	0.11	4	70.110				2559
20655	-55	9598	8.8	F5	21 26 22.666	0.17	4	69.224	-54 59 51.62	0.16	4	69.224				16801
20656	-64	4138	8.9	K2	26 24.822	0.29	4	69.468	-64 03 04.78	0.21	4	69.468				20280
20657	-32	16590	8.6	K2	26 27.786	0.06	4	70.075	-32 12 49.97	0.13	4	70.075				16802
20658	-56	9656	8.39	A3	26 28.545	0.13	4	70.258	-56 29 50.89	0.16	4	70.258		30073		16803
20659	-44	14505	7.06	G5	26 38.370	0.11	4	70.369	-43 43 35.67	0.10	4	70.369		30075		2560
20660	-60	7481	8.1	G5	21 26 39.095	0.22	4	69.903	-60 25 35.26	0.07	4	69.903				16804
20661	-13	5941	8.6	G5	26 39.951	0.25	2	70.756	-12 59 27.57	0.35	2	70.756				16805
20662	-40	14371	8.5	K0	26 42.558	0.07	4	70.538	-40 37 13.39	0.05	3	70.250				2561
20663	-20	6219	8.9	F8	26 43.820	0.14	2	71.676	-19 59 15.25	0.04	2	71.676				16806
20664	+0	4732	8.5	A3	26 49.474	0.14	2	71.668	+0 55 03.53	0.09	2	71.668				16807

20626 SDS, 8.9m-9.4m, 1°4, 284°.

20627 5.3m to 6.3m.

CATALOG OF 23,001 STARS FOR 1950.0

521

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Deci 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
20665	-4	5460	8.5	G0	21 26 51.833	0.22	2	72.101	-3 44 03.99	0.39	2	72.101				16808
20666	-46	13971	8.0	K0	26 55.014	0.12	5	70.641	-45 47 48.77	0.18	4	70.630				2562
20667	-14	6039	7.11	K2	26 56.003	0.04	2	71.958	-14 14 45.50	0.05	2	71.958				16809
20668	-44	14506	7.33	G5	26 58.403	0.09	4	70.577	-44 17 40.16	0.21	4	70.577		30086		2563
20669	-62	6237	8.92	K5	26 58.880	0.15	4	70.022	-62 27 33.68	0.03	4	70.022		30089		16810
20670	-30	18646	9.2	F8	21 27 06.706	0.05	4	70.031	-30 20 22.29	0.22	4	70.031				16811
20671	-79	1152	7.79	K0	27 10.357	0.08	4	69.928	-78 45 50.77	0.16	4	69.928		30094		20281
20671	SP				27 10.376	0.15	4	69.639	-78 45 51.09	0.21	4	69.639		30094		20281
20672	-19	6107	6.54	F2	27 11.408	0.15	2	72.127	-19 22 02.68	0.30	2	72.127		30095	4742	16812
20673	-15	5995	8.7	F8	27 11.867	0.11	2	72.150	-15 22 37.28	0.10	2	72.150				16813
20674	-9	5758	8.9	K0	21 27 18.139	--	1	71.540	-8 49 16.77	--	1	71.540				16814
20675	+0	4736	8.7	F0	27 19.082	--	1	71.560	+1 23 10.76	--	1	71.560				16815
20676	-7	5574	8.7	K0	27 22.397	--	1	71.650	-7 30 48.56	--	1	71.650				16816
20677	-29	17818	8.5	K0	27 26.879	0.15	4	69.822	-29 03 35.28	0.17	4	69.822				16817
20678	-59	7704	7.81	K2	27 26.925	0.07	4	70.045	-59 37 37.87	0.05	4	70.045		30103		16819
20679	-36	14833	8.1	K2	21 27 27.055	0.13	4	71.024	-36 13 04.39	0.17	4	71.024				16818
20680	-57	9876	8.4	G5	27 29.261	0.19	4	70.271	-57 10 34.84	0.20	4	70.271				16820
20681*	-24	16686	8.25	G5	27 31.039	0.28	4	69.834	-24 38 51.16	0.14	4	69.834		30105		16821
20682	-16	5876	8.4	K0	27 31.560	0.22	2	70.590	-16 31 29.22	0.17	2	70.590				16822
20683	-25	15459	7.44	K5	27 32.932	0.25	4	69.858	-25 24 47.62	0.15	4	69.858		30106		16823
20684	-74	1994	7.92	M0	21 27 34.490	0.16	4	70.334	-74 06 49.39	0.22	4	70.334		30107		20282
20685*	-39	14285	7.5	F5	27 35.826	0.12	4	71.100	-38 51 29.00	0.14	4	71.100				16824
20686	-5	5564	8.0	A3	27 38.050	0.20	2	71.777	-4 43 19.22	0.11	2	71.777				16825
20687	-63	4680	7.9	K0	27 38.974	0.13	4	70.289	-63 16 09.77	0.23	4	70.289				16826
20688	-2	5551	8.3	A2	27 39.168	--	1	71.655	-1 45 16.49	--	1	71.655				16827
20689	+23	4325	4.76	K5	21 27 40.898	0.08	28	71.170	+23 25 07.90	0.06	28	71.170	1565	30109	4744	31565
20690	+2	4368	8.4	F0	27 46.489	0.09	2	72.536	+2 34 22.74	--	1	71.652				16828
20691	-33	15614	9.3	K0	27 58.297	0.18	4	71.797	-33 37 23.58	0.14	3	71.256				16829
20692	-61	6560	8.0	K0	27 59.457	0.14	4	69.864	-61 21 20.32	0.12	4	69.864				16830
20693	-50	13385	8.5	K2	28 09.705	0.11	4	70.612	-50 00 14.92	0.15	4	70.612				2564
20694	-70	2856	7.41	K0	21 28 18.233	0.20	4	69.265	-69 42 39.57	0.19	4	69.265		30121		20283
20695	-59	7706	8.2	M0	28 19.480	0.14	4	70.284	-59 02 10.02	0.31	4	70.284				16831
20696	-34	15101	9.3	K2	28 21.326	0.12	5	71.178	-34 06 39.71	0.21	4	71.278				16832
20697	-17	6302	8.5	A5	28 28.493	0.06	2	72.032	-17 28 50.17	0.03	2	72.032				16833
20698	-66	3571	8.2	K0	28 32.349	0.13	4	69.628	-66 01 57.27	0.22	4	69.628				20284
20699	-35	14823	8.0	F2	21 28 36.714	0.39	4	71.142	-35 17 54.17	0.26	4	71.142				16834
20700	-22	5705	8.6	K0	28 41.939	0.13	3	69.753	-22 13 55.05	0.23	3	69.753				16835
20701*	-36	14844	8.5	F5	28 45.359	0.10	4	70.894	-35 47 25.47	0.16	4	70.894				16836
20702	+3	4568	7.01	A3	28 47.674	--	1	71.639	+3 35 50.83	--	1	71.639		30135		16837
20703	-32	16620	7.9	F2	28 50.651	0.19	3	69.614	-31 46 07.75	0.19	3	69.614				16838
20704	-10	5696	7.39	G0	21 28 53.753	--	1	71.688	-9 57 53.42	--	1	71.688		30136		16839
20705	-6	5770	3.07	G0	28 55.674	0.03	76	71.046	-5 47 31.74	0.04	76	71.046	808	30137	4750	80808
20706	-41	14550	5.35	K0	28 56.403	0.07	6	70.071	-41 24 02.52	0.08	6	70.071	3719	30138		33719
20707	-68	3429	9.0	M	28 57.407	0.09	4	69.507	-67 53 03.13	0.09	4	69.507				20285
20708	-34	15110	5.99	A2	29 13.413	0.04	35	71.134	-34 09 57.73	0.05	35	71.134	1566	30142	4751	31566
20709	+3	4572	8.9	K2	21 29 37.281	--	1	70.527	+3 29 46.16	--	1	70.527				16840
20710	-12	6026	6.85	K5	29 39.412	0.21	2	72.177	-12 29 19.88	0.17	2	72.177		30151		16841
20711	-25	15479	6.42	A5	29 40.736	0.13	6	70.698	-24 48 43.88	0.11	6	70.698	3720	30153	4752	33720
20712	-70	2857	8.2	K0	29 55.476	0.11	4	69.535	-70 04 59.02	0.13	4	69.535				20286
20713	-15	6005	9.0	F0	29 55.983	0.25	2	72.465	-14 41 23.06	--	1	71.510				16842
20714	-54	9886	8.7	F0	21 29 57.478	0.06	4	69.572	-54 22 38.41	0.17	4	69.572				16843
20715	-57	9888	8.21	K2	30 01.574	0.16	4	69.504	-57 18 15.05	0.11	4	69.504		30161		16844
20716	-2	5563	8.3	M0	30 05.472	0.05	2	70.595	-1 49 47.82	0.02	2	70.595				16845
20717	-27	15496	8.0	K0	30 09.299	0.14	4	69.822	-27 11 54.57	0.12	4	69.822				16846
20718	-45	14367	5.73	K0	30 09.569	0.05	27	70.618	-45 04 15.33	0.06	25	70.651	1567	30163	4754	31567
20719	-50	13397	9.2	K0	21 30 12.963	0.09	4	69.868	-50 31 15.22	0.28	4	69.868				2565
20720	-49	13515	8.8	M0	30 13.859	0.35	4	71.062	-49 13 29.38	0.10	4	71.062				2566
20721	-21	6038	8.6	K0	30 23.113	0.20	4	69.879	-20 53 52.54	0.18	4	69.879		30166		16847
20722	-19	6117	8.5	M1	30 25.459	0.31	2	72.156	-18 47 23.69	0.05	2	72.156				16848
20723	-64	4151	8.9	K2	30 25.821	0.13	4	69.180	-63 51 58.19	0.17	4	69.180				20287
20724	-38	14604	9.1	K0	21 30 29.431	0.02	5	71.578	-38 06 31.87	0.13	4	71.118				16849
20725	+3	4575	7.5	K0	30 40.350	0.07	2	71.969	+4 20 27.79	0.21	2	71.969				16850
20726	-47	13854	7.06	K0	30 44.926	0.19	4	71.013	-46 49 59.14	0.15	4	71.013		30175		2567
20727	+2	4378	8.5	K5	30 51.490	0.09	2	72.051	+3 03 24.77	0.04	2	72.051				16851
20728	-30	18689	8.0	K2	30 52.749	0.17	4	70.098	-29 41 24.90	0.23	4	70.098				16852
20729*	-16	5885	7.08	F5	21 30 54.648	0.01	2	71.566	-16 25 20.97	0.25	2	71.566		30178		16853
20730	-7	5584	8.6	K0	31 01.057	0.33	2	71.581	-6 35 46.08	0.45	2	71.581		30181		16854
20731	-53	10097	9.1	K5	31 06.635	0.17	4	69.637	-53 27 36.72	0.17	4	69.637				16855
20732	-52	11895	8.2	K5	31 07.046	0.05	5	70.540	-52 25 59.53	0.14	5	70.540				16856
20733	-6	5781	7.8	A0	31 08.632	0.10	2	72.015	-5 38 27.31	0.22	2	72.015		30184	4755	16857
20734	-3	5244	8.7	F5	21 31 09.408	0.29	2	71.694	-2 35 31.84	0.01	2	71.694				16858
20735	-12	6029	8.7	G5	31 12.272	--	1	71.502	-12 21 37.65	--	1	71.502				16859
20736	-0	4238	8.3	K2	31 21.704	--	1	71.535	+0 00 06.05	--	1	71.535		30188		16860
20737	+1	4496	8.0	K0	31 30.236	0.25	2	72.158	+2 03 25.09	0.00	2	72.158				16861
20738	-14	6070	8.0	G5	31 33.075	0.07	2	72.136	-13 42 24.39	0.05	2	72.136		30194		16862

20681 A 15023, 8.5m-11.3m, 1°4, 252°.
 20685 SDS, 7.6m-10.6m, 1°0, 36°.

20701 9.1m-9.4m, 0°5, 82°.
 20729 A 15080, 7.1m-10.5m, 0°9, 27°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
20739	-40	14404	8.2	G5	21 31 34.761	0.18	4	70.150	-39 45 01.98	0.15	4	70.150				16863
20740	-25	15498	8.7	A5	31 37.338	0.07	4	69.249	-25 10 24.49	0.09	4	69.249				16864
20741	-4	5487	6.99	K0	31 38.861	0.07	2	71.635	-3 38 00.56	0.13	2	71.635		30198	4757	16865
20742	-33	15642	9.2	K5	31 45.568	0.10	4	70.463	-32 50 53.61	0.05	4	70.463				16866
20743	-45	14375	8.0	F8	31 48.170	0.15	4	70.598	-45 13 18.85	0.30	4	70.598				2568
20744	-77	1507	9.0	A3	21 31 55.976	0.11	4	69.873	-76 44 25.54	0.12	4	69.873				20288
20744	SP				31 55.936	0.09	4	70.087	-76 44 25.79	0.30	4	70.087				20288
20745	-30	18703	6.56	B8	31 56.330	0.12	6	68.976	-29 55 09.50	0.10	6	68.976	3721	30201		33721
20746	-67	3812	8.5	G5	31 57.093	0.08	4	69.148	-67 33 27.24	0.13	4	69.148				20289
20747	-60	7488	7.91	G0	31 58.448	0.12	4	68.903	-59 55 00.49	0.33	4	68.903		30202		16867
20748	-8	5685	8.0	F0	21 32 00.195	0.19	2	71.672	-7 36 55.87	0.12	2	71.672				16868
20749	-9	5770	8.0	K0	32 03.006	0.30	2	72.158	-9 18 36.59	0.09	2	72.158		30205		16869
20750	-21	6047	8.2	M0	32 03.220	0.10	4	69.460	-20 40 06.52	0.17	4	69.460		30206		16870
20751	+1	4502	8.7	K0	32 04.108	--	1	72.803	+2 02 03.68	--	1	72.803				16871
20752	-37	14361	8.9	K0	32 07.068	0.08	4	70.376	-36 52 56.00	0.25	4	70.376				16872
20753	-28	17361	8.8	A0	21 32 10.022	0.07	4	70.005	-27 50 08.36	0.11	4	70.005				16873
20754	-25	15505	7.6	F8	32 24.729	0.13	4	70.699	-25 32 30.62	0.12	4	70.699				16874
20755	-23	16995	8.26	K5	32 31.849	0.10	4	70.030	-23 20 30.51	0.12	4	70.030		30216		16875
20756	-5	5587	8.7	G5	32 43.466	0.00	2	71.638	-4 54 53.02	0.06	2	71.638				16876
20757	-79	1158	6.33	F5	32 48.477	0.13	6	69.073	-79 40 03.21	0.09	6	69.073	3723	30221		33723
20757	SP				32 48.437	0.13	6	68.647	-79 40 03.38	0.23	6	68.647	3723	30221		53723
20758	+0	4750	7.38	F8	32 50.159	0.19	2	70.129	+0 45 08.16	0.10	2	70.129		30222		16877
20759	-48	13942	9.0	M1	32 51.897	0.10	4	70.542	-48 10 45.83	0.16	4	70.542				2569
20760	-12	6035	8.5	F0	32 51.962	0.13	2	71.469	-12 00 48.73	0.02	2	71.469		30223		16878
20761	-75	1719	8.5	K0	32 52.491	0.06	4	70.050	-75 13 08.09	0.11	4	70.050				20290
20761	SP				32 52.500	0.33	4	69.698	-75 13 08.90	0.18	4	69.698				20290
20762	-56	9686	8.7	G5	32 54.899	0.12	4	69.170	-56 36 11.42	0.05	4	69.170				16879
20763	-10	5711	8.4	K0	33 00.135	0.27	2	71.511	-10 12 29.92	0.33	2	71.511				16880
20764	-40	14417	7.1	K5	33 15.791	0.12	4	70.160	-40 33 16.76	0.10	4	70.160				2570
20765*	-41	14581	8.5	F8	33 16.195	0.14	4	70.575	-40 54 14.96	0.15	4	70.575				2571
20766	-35	14868	7.6	K5	21 33 18.348	0.26	4	70.508	-35 24 13.45	0.08	4	70.508				16881
20767	-65	3934	8.4	K0	33 23.543	0.08	4	69.107	-65 32 11.70	0.03	4	69.107				20291
20768	-67	3816	8.9	K0	33 32.352	0.19	4	70.218	-66 41 12.94	0.20	4	70.218				20292
20769	-19	6131	7.65	F2	33 35.264	0.14	2	71.609	-18 36 59.78	0.18	2	71.609		30238		16882
20770	-33	15662	8.8	K2	33 38.189	0.09	4	70.646	-33 19 14.38	0.12	4	70.646				16883
20771	-46	14019	8.0	K0	21 33 45.225	0.08	4	70.866	-45 57 02.21	0.12	4	70.866				2572
20772	-45	14386	8.6	K2	33 46.630	0.10	4	70.577	-45 07 00.08	0.12	4	70.577				2573
20773	-22	5726	8.4	K0	33 54.249	0.05	4	69.195	-21 43 37.68	0.09	4	69.195				16884
20774	-5	5592	7.7	K0	33 55.275	0.04	2	71.674	-5 16 37.61	0.21	2	71.674				16885
20775	-42	15530	8.5	G5	33 55.297	0.07	5	70.812	-41 45 43.87	0.20	4	71.083				2574
20776	-29	17909	7.5	K0	21 34 04.835	0.13	4	69.009	-28 50 02.44	0.10	4	69.009				16886
20777	-62	6248	8.51	G5	34 09.191	0.07	4	68.937	-62 28 46.29	0.08	4	68.937		30251		16887
20778	-31	18373	8.4	K0	34 10.429	0.11	4	69.164	-30 47 00.48	0.06	4	69.164				16888
20779	-16	5895	8.7	K0	34 11.783	0.23	2	72.023	-15 37 19.97	0.10	2	72.023				16889
20780	-20	6251	4.72	B5p	34 17.026	0.11	6	69.169	-19 41 27.63	0.15	6	69.169	3724	30252	4764	33724
20781	-49	13536	8.6	K0	21 34 22.526	0.10	4	70.104	-49 32 47.08	0.18	4	70.104				2575
20782	-63	4694	8.4	K5	34 26.232	0.13	4	69.094	-63 34 05.69	0.05	4	69.094				16890
20783	-8	5696	8.6	K2	34 27.580	0.17	3	72.232	-8 02 27.22	0.05	3	72.232				16891
20784	-31	18376	8.6	K5	34 27.673	0.07	4	70.189	-30 59 12.36	0.07	4	70.189				16892
20785	-48	13951	9.0	K2	34 31.709	0.10	4	70.409	-48 33 07.05	0.15	4	70.409				2576
20786	-11	5632	8.8	K5	21 34 52.881	0.07	2	72.139	-11 14 57.99	0.05	2	72.139				16893
20787	-35	14879	8.4	K5	34 58.396	0.19	4	71.065	-34 54 16.41	0.11	4	71.065				16894
20788	+4	4706	6.87	A5	34 58.483	0.24	2	71.618	+4 27 25.35	0.24	2	71.618		30264		16895
20789	-1	4180	6.27	A2	34 59.669	0.26	2	71.954	-0 36 56.61	0.16	2	71.954		30265		16896
20790	-43	14633	8.5	K0	34 59.718	0.17	4	70.076	-43 39 31.89	0.08	4	70.076				2577
20791	-37	14386	7.9	K0	21 35 01.116	0.11	5	70.221	-37 23 23.45	0.07	4	70.106				16897
20792	-7	5600	8.5	K0	35 04.106	0.12	2	72.176	-6 46 13.26	0.25	2	72.176				16898
20793	-8	5701	4.78	A5	35 05.627	0.03	63	71.611	-8 04 46.40	0.03	62	71.629	1569	30268	4769	31569
20794	+0	4757	8.6	F5	35 05.647	0.05	2	70.547	+1 02 21.65	0.04	2	70.547				16899
20795	-17	6329	7.7	K0	35 10.278	0.30	2	72.025	-17 26 06.35	0.19	2	72.025				16900
20796	-26	15722	7.44	G5	21 35 18.086	0.05	4	69.213	-25 40 15.23	0.13	4	69.213		30272		16901
20797	-77	1509	8.4	K2	35 23.572	0.03	3	69.779	-77 14 32.66	0.07	3	69.779				20293
20797	SP				35 23.550	0.07	4	70.183	-77 14 32.54	0.34	4	70.183				20293
20798	+18	4827	5.29	F0	35 25.091	0.08	9	71.078	+19 05 34.16	0.15	9	71.078	1570	30274	4770	31570
20799	-1	4182	9.0	A2	35 27.889	0.18	2	72.538	-0 59 04.10	--	1	71.655				16902
20800	-15	6027	7.14	G5	21 35 29.643	--	1	70.680	-15 08 09.97	--	1	70.680		30276		16903
20801	-55	9645	9.0	K0	35 30.777	0.06	4	69.238	-55 05 26.57	0.23	4	69.238				16904
20802	-14	6088	8.0	A0	35 32.130	--	1	71.642	-13 45 33.69	--	1	71.642			4771	16905
20803	-83	719	7.8	K0	35 40.453	0.18	4	70.014	-83 18 01.95	0.09	4	70.014				20294
20803	SP				35 40.447	0.23	4	70.072	-83 18 01.85	0.17	4	70.072				20294
20804	-17	6333	8.2	K0	21 35 47.894	--	1	71.699	-17 05 22.54	--	1	71.699		30284		16906
20805	+3	4589	8.7	F8	35 52.521	--	1	71.696	+4 03 16.62	--	1	71.696				16907
20806	-2	5590	8.9	K2	35 56.659	--	1	71.707	-2 14 29.08	--	1	71.707				16908
20807	-77	1510	3.74	K0	36 00.027	0.03	84	70.608	-77 36 55.19	0.04	84	70.608	810	30289	4773	30810
20807	SP				36 00.044	0.05	53	71.003	-77 36 55.36	0.08	52	70.981	810	30289	4773	50810

20745 SDS, 9.6mm-9.6mm, 0°3, 225°.

CATALOG OF 23,001 STARS FOR 1950.0

523

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
20808	-4	5503	8.3	K2	21 36 02.628	-	1	71.677	-3 48 34.00	-	1	71.677				16909
20809	-52	11910	7.98	F0	36 17.936	0.18	4	70.602	-51 47 57.34	0.12	4	70.602		30296		16910
20810	-35	14897	8.5	K5	36 18.241	0.13	4	70.100	-35 13 51.05	0.01	4	70.100				16911
20811	-34	15168	9.0	K2	36 27.342	0.17	4	70.360	-33 51 52.67	0.16	4	70.360				16912
20812	-52	11911	6.28	F5	36 35.569	0.17	6	70.414	-52 35 09.43	0.12	6	70.414	3726	30304	4775	33726
20813	-73	2234	8.6	M1	21 36 41.660	0.20	4	70.867	-72 46 22.56	0.16	4	70.867				20295
20814	-43	14647	6.88	K0	36 41.900	0.10	6	70.105	-43 21 32.42	0.15	6	70.105	3727	30308		33727
20815	-11	5640	6.18	K0	36 46.974	0.10	3	72.045	-10 48 11.80	0.12	3	72.045	3728	30309		16913
20816	-36	14913	8.3	F2	36 54.165	0.16	4	70.869	-36 04 09.93	0.07	4	70.869				16914
20817	-41	14602	9.29	G5	36 55.412	0.03	4	71.056	-40 43 14.52	0.06	4	71.056		30313		2578
20818	+1	4517	5.33	K0	21 37 01.002	0.07	6	71.047	+2 01 02.77	0.16	6	71.047	3729	30315		33729
20819	-39	14369	8.6	G5	37 05.483	0.16	5	70.555	-39 07 06.70	0.12	4	70.523				16915
20820	-44	14590	9.1	K2	37 06.895	0.19	4	70.553	-44 37 55.42	0.17	4	70.553				2579
20821	+1	4518	7.9	K0	37 13.158	-	1	71.535	+1 54 44.05	-	1	71.535		30319		16916
20822	-17	6340	3.80	F0p	37 19.650	0.02	98	71.147	-16 53 21.47	0.04	94	71.173	812	30320	4776	80812
20823	-58	7877	7.96	K0	21 37 28.666	0.23	5	70.897	-57 57 56.28	0.26	5	70.897		30326		16917
20824	-10	5728	8.0	F8	37 31.179	-	1	71.642	-10 01 14.38	-	1	71.642		30327		16918
20825	-29	17936	8.6	K0	37 36.163	0.14	4	70.402	-29 27 31.03	0.12	4	70.402				16919
20826	-7	5613	7.01	K0	37 47.260	-	1	71.557	-7 12 08.74	-	1	71.557		30329		16920
20827	-19	6146	7.39	K5	37 47.707	-	1	71.565	-19 07 23.39	-	1	71.565		30330		16921
20828	-24	16766	8.3	K5	21 37 50.420	0.25	4	70.301	-24 08 01.55	0.14	3	69.261				16922
20829	-31	18401	9.0	K5	37 51.600	0.14	3	69.748	-31 15 51.65	0.08	3	69.748				16923
20830	-48	13971	9.1	K2	37 51.932	0.13	4	71.185	-47 43 16.20	0.17	4	71.185				2580
20831	-31	18402	9.1	F0	37 52.651	0.03	3	70.033	-30 54 03.29	0.08	3	70.033				16924
20832	-35	14910	8.15	M3	37 55.278	0.21	3	70.665	-34 44 52.31	0.22	3	70.665		30332		16925
20833	-3	5272	7.8	K5	21 37 56.316	-	1	71.688	-2 44 39.10	-	1	71.688		30333		16926
20834	-32	16696	8.1	K2	38 01.527	0.13	4	71.149	-32 09 02.91	0.19	4	71.149				16927
20835	+0	4762	8.4	K2	38 03.722	-	1	71.707	+1 00 53.30	-	1	71.707				16928
20836	+3	4599	7.12	K5	38 16.940	-	1	71.674	+3 40 08.50	-	1	71.674		30339		16929
20837	-70	2864	8.9	M2	38 17.275	0.27	3	71.010	-70 32 44.14	0.73	3	71.010				20296
20838	-9	5809	7.9	G5	21 38 17.605	-	1	71.699	-9 22 10.98	-	1	71.699				16930
20839	-53	10126	8.6	K5	38 18.304	0.13	5	71.012	-53 18 48.59	0.15	4	71.589				16931
20840	+0	4765	8.5	F5	38 34.337	-	1	71.702	+1 04 49.75	-	1	71.702		30347		16932
20841	-41	14614	8.5	K0	38 40.332	0.06	4	70.593	-40 54 34.80	0.01	4	70.593				2581
20842	-22	5746	7.85	K2	38 43.788	0.17	4	70.636	-21 53 28.09	0.12	4	70.636		30351		16933
20843	-74	2008	9.3	K5	21 38 47.660	0.08	4	70.804	-74 14 00.90	0.06	4	70.804				20297
20844	-20	6266	7.06	K0	38 58.246	0.27	2	72.064	-20 02 04.54	0.35	2	72.064		30359		16934
20845	-50	13446	7.78	G5	39 02.021	0.05	4	69.642	-50 19 20.14	0.18	4	69.642		30361		2582
20846	-37	14424	8.3	K0	39 02.888	0.04	4	70.129	-37 16 35.36	0.19	4	70.129				16935
20847	-2	5603	8.5	F8	39 03.585	0.10	2	71.456	-2 09 37.06	0.21	2	71.456				16936
20848	-30	18779	9.1	K0	21 39 06.609	0.17	3	70.434	-29 54 01.68	0.15	3	70.434				16937
20849	-25	15547	8.2	K2	39 07.774	0.20	4	70.355	-24 52 53.85	0.13	4	70.355				16938
20850	-26	15756	7.50	M0	39 11.870	0.04	4	70.584	-26 05 18.53	0.01	4	70.584		30367	4782	16939
20851	-41	14618	8.5	G0	39 12.746	0.09	4	70.792	-41 26 15.32	0.04	4	70.792				2583
20852	-28	17409	8.4	K0	39 17.979	0.07	4	70.622	-27 41 57.14	0.09	4	70.622				16940
20853	-12	6065	8.3	A2	21 39 18.279	0.18	2	71.623	-12 28 41.52	0.04	2	71.623				16941
20854	-0	4249	7.67	F5	39 22.755	0.34	2	71.168	+0 07 03.13	0.07	2	71.168		30371		16942
20855	-68	3440	7.10	M0	39 24.979	0.07	4	69.150	-68 17 38.46	0.13	4	69.150		30372		20298
20856	-51	13039	9.0	K5	39 26.350	0.13	4	69.654	-51 13 16.73	0.15	4	69.654				2584
20857	-69	3190	9.0	K2	39 40.504	0.15	4	69.699	-69 07 40.98	0.08	4	69.699				20299
20858	-5	5619	8.5	A3	21 39 42.391	0.16	2	71.295	-4 34 07.59	0.02	2	71.295				16943
20859	-36	14940	8.2	K0	39 43.216	0.14	4	70.088	-35 48 38.99	0.18	4	70.088				16944
20860	+5	4850	5.63	M0	39 45.367	0.14	6	68.997	+5 27 05.41	0.14	6	68.997	3732	30378		33732
20861	-16	5924	8.2	K0	39 48.651	0.01	2	72.012	-15 59 25.17	0.42	2	72.012				16945
20862	-12	6074	8.6	K0	39 54.844	0.21	2	71.973	-12 16 16.74	0.09	2	71.973				16946
20863	-50	13452	9.2	K2	21 39 57.735	0.20	4	70.067	-49 52 05.64	0.12	4	70.067				2585
20864	-61	6578	8.6	K5	40 01.141	0.05	4	69.802	-61 38 00.41	0.10	4	69.802				16947
20865	-23	17068	8.2	K0	40 09.153	0.13	4	69.165	-23 23 58.48	0.13	4	69.165				16948
20866	-43	14674	8.5	K0	40 10.309	0.21	4	70.543	-43 37 12.82	0.25	4	70.543				2586
20867	-57	9939	7.91	K0	40 12.846	0.15	4	69.632	-57 35 51.20	0.15	4	69.632		30389		16949
20868	-57	9940	6.78	G0	21 40 26.501	0.10	6	69.087	-57 33 15.98	0.10	6	69.087	3734	30397		33734
20869	-55	9670	7.18	M0	40 27.720	0.15	4	69.720	-54 43 46.14	0.11	4	69.720		30398		16950
20870	-2	5616	8.6	K0	40 28.379	0.28	2	72.112	-2 15 43.97	0.05	2	72.112				16951
20871	-24	16790	7.20	K0	40 29.866	0.07	4	68.998	-24 22 14.61	0.09	4	68.998		30401		16952
20872	-55	9671	7.90	K2	40 33.195	0.06	2	71.129	-55 17 10.27	0.22	2	71.129		30403		16953
20873	-38	14696	8.2	K0	21 40 33.762	0.12	5	70.627	-38 22 21.69	0.09	4	70.613				16954
20874	-31	18424	7.5	K0	40 34.970	0.10	4	70.409	-31 28 41.15	0.05	3	70.650				16955
20875	-8	5719	8.2	K0	40 46.135	0.00	2	72.139	-7 38 15.79	0.09	2	72.139				16956
20876	-18	5998	8.3	K5	40 46.647	0.17	2	72.209	-17 36 58.74	0.45	2	72.209				16957
20877	+4	4728	8.4	K2	40 47.871	0.03	2	72.124	+4 52 46.91	0.40	2	72.124				16958
20878	-56	9717	9.4	K0	21 41 50.733	0.18	4	69.647	-56 05 00.35	0.07	4	69.647				16959
20879	-71	2632	6.18	B8	41 05.145	0.16	7	70.429	-71 14 20.91	0.15	6	70.424	3735	30411		33735
20879 SP					41 05.143	0.09	44	71.365	-71 14 21.40	0.13	43	71.367	3735	30411		53735
20880	-48	13990	8.0	G5	41 08.010	0.08	4	70.848	-48 32 15.88	0.18	4	70.848				2587
20881	-67	3829	8.0	M1	41 21.936	0.10	4	69.965	-67 20 02.18	0.18	4	69.965				20300

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
20882	-49	13587	8.0	K2	21 41 24.705	0.14	4	70.502	-49 03 50.89	0.14	4	70.502				2588
20883	-39	14405	6.30	G5	41 25.360	0.11	6	69.529	-38 46 52.80	0.13	6	69.529	3736	30424	4789	33736
20884	+2	4401	8.8	A0	41 29.123	0.08	2	71.611	+3 21 07.08	0.18	2	71.611				16960
20885	-42	15609	8.0	G0	41 36.900	0.18	4	71.153	-42 21 35.44	0.15	4	71.153				2589
20886	+9	4891	2.54	K0	41 43.793	0.04	45	71.613	+9 38 41.54	0.05	45	71.613	815	30431	4790	30815
20887	-82	865	9.7	F8	21 41 48.104	0.16	4	69.960	-82 21 20.42	0.15	4	69.960				20301
20887	SP				41 48.008	0.17	4	70.206	-82 21 20.73	0.21	4	70.206				20301
20888	-0	4260	9.0	F0	41 48.214	--	1	71.510	-0 05 40.28	--	1	71.510				16961
20889	-6	5812	8.7	K5	41 55.044	0.14	2	71.157	-5 43 53.39	0.37	2	71.157				16962
20890	-33	15734	4.35	A0	41 58.469	0.03	69	71.203	-33 15 19.85	0.04	69	71.203	814	30439	4791	30814
20891	+14	4668	6.10	G0	21 42 06.906	0.08	6	70.922	+14 32 33.37	0.20	5	70.963	3737	30443		33737
20892	-10	5755	8.7	K2	42 11.768	--	1	71.655	-10 26 37.69	--	1	71.655				16963
20893	-23	17083	7.2	F2	42 15.584	0.07	4	70.355	-22 47 39.69	0.08	4	70.355				16964
20894	-81	972	9.3	G0	42 17.476	0.15	4	69.948	-81 28 01.90	0.12	4	69.948				20302
20894	SP				42 17.505	0.19	4	69.707	-81 28 01.46	0.05	4	69.707				20302
20895	-83	721	7.03	F5	21 42 19.263	0.07	6	69.399	-82 39 56.72	0.28	6	69.399	3996	30447		33996
20895	SP				42 19.267	0.09	6	68.646	-82 39 56.44	0.28	6	68.646	3996	30447		53996
20896	-44	14621	8.5	K0	42 29.774	0.09	4	70.769	-44 22 14.51	0.19	4	70.769				2590
20897	-63	4703	6.96	K0	42 33.737	0.08	6	69.232	-62 46 50.35	0.08	6	69.232	3738	30457		33738
20898	-53	10141	9.1	F8	42 33.815	0.12	4	69.210	-53 20 11.76	0.05	4	69.210				16965
20899	-14	6116	8.8	K0	21 42 35.438	--	1	71.685	-13 54 24.43	--	1	71.685				16966
20900	-29	17984	7.98	F2	42 38.937	0.12	4	69.637	-28 57 19.25	0.23	3	69.621				16967
20901	-13	6008	6.66	F5	42 39.369	0.22	2	71.755	-13 00 51.02	0.34	2	71.755				16968
20902	-41	14637	8.5	G0	42 43.306	0.14	5	71.082	-41 27 37.96	0.15	4	71.182				2591
20903	-0	4261	8.2	K0	42 48.382	0.25	2	72.116	-0 26 28.81	0.35	2	72.116				16969
20904	-3	5296	8.0	F0	21 42 53.162	0.13	2	72.068	-3 10 51.13	0.44	2	72.068				16970
20905	-5	5632	8.2	A2	42 58.135	0.08	2	72.131	-4 39 49.02	0.22	2	72.131				16971
20906	-45	14442	9.5	K5	42 58.207	0.10	4	71.815	-45 23 10.09	0.08	3	71.275				2592
20907	-47	13920	7.65	K2	43 00.194	0.18	4	71.061	-47 38 03.70	0.10	4	71.061				2593
20908	-58	7892	9.06	K5	43 02.240	0.06	4	69.621	-58 13 40.78	0.22	4	69.621				16972
20909	-32	16730	8.7	K0	21 43 05.619	0.13	5	71.768	-32 33 19.15	0.12	4	71.355				16973
20910	+0	4776	8.4	K2	43 11.321	0.43	2	72.596	+1 26 17.60	0.05	2	72.596				16974
20911	-73	2237	7.67	F0	43 16.205	0.08	4	70.553	-72 54 49.20	0.06	4	70.553				20303
20912	-43	14704	8.5	K0	43 17.843	0.09	4	71.385	-43 10 07.25	0.12	4	71.385				2594
20913	-39	14419	8.5	K0	43 19.841	0.21	4	70.379	-39 29 41.58	0.14	4	70.379				16975
20914*	-39	14421	8.1	F5	21 43 27.206	0.18	4	70.775	-38 57 11.89	0.12	4	70.775				16976
20915	-16	5942	8.8	K0	43 32.870	--	1	71.737	-16 13 33.77	--	1	71.737				16978
20916	-46	14065	7.79	K0	43 39.329	0.14	4	70.750	-46 37 16.48	0.11	4	70.750				2595
20917	-18	6007	7.54	K0	43 41.611	--	1	71.713	-18 09 15.78	--	1	71.713				16979
20918	+22	4472	5.45	K0	43 46.192	0.14	6	70.300	+22 43 02.38	0.09	6	70.300	3739	30479		33739
20919	-4	5534	8.6	F5	21 43 46.338	0.37	2	72.238	-4 21 32.75	0.00	2	72.238				16980
20920	-53	10148	8.7	K2	43 49.374	0.09	4	70.837	-52 54 04.82	0.06	4	70.837				16981
20921	-12	6087	5.43	A0	43 50.732	0.07	17	71.878	-11 35 50.88	0.09	17	71.878	818	30481	4797	30818
20922	-51	13064	9.0	K5	43 54.240	0.14	3	71.377	-51 25 54.10	0.19	3	71.377				2596
20923	-54	9947	9.2	K5	43 54.904	0.25	3	70.039	-54 33 41.35	0.12	3	70.039				16982
20924	-2	5631	7.16	M3	21 43 56.522	0.17	7	70.172	-2 26 40.41	0.08	6	70.124	3740	30482	4798	33740
20925	-64	4167	8.6	G5	43 57.314	0.18	4	71.053	-64 09 22.97	0.13	4	71.053				20304
20926	-12	6088	7.02	F8	44 00.476	--	1	72.476	-11 55 43.18	--	1	72.476				16983
20927	-25	15581	8.0	F5	44 08.344	0.07	4	70.640	-25 18 17.36	0.16	4	70.640				16984
20928	-38	14725	9.0	K5	44 11.409	0.12	3	70.622	-37 41 19.20	0.17	3	70.622				16985
20929	-9	5839	8.3	K0	21 44 12.417	--	1	71.565	-8 42 07.17	--	1	71.565				16986
20930	-16	5943	2.98	A5	44 17.356	0.06	18	70.617	-16 21 24.62	0.08	18	70.617	819	30491	4800	30819
20931	-33	15750	8.6	K2	44 18.006	0.15	4	70.782	-33 10 40.59	0.13	4	70.782				16987
20932	-22	5764	8.8	A2	44 18.054	0.08	3	70.563	-21 53 26.39	0.23	3	70.563				16988
20933	-34	15251	9.4	--	44 25.085	0.11	2	70.121	-34 22 03.98	0.19	2	70.121				16989
20934	-15	6065	8.2	F5	21 44 26.825	--	1	72.525	-14 44 44.90	--	1	72.525				16990
20935	-61	6586	9.0	K0	44 29.605	0.35	3	70.606	-60 47 09.12	0.27	3	70.606				16991
20936	-2	5636	7.59	F5	44 32.528	--	1	71.740	-2 31 26.36	--	1	71.740				16992
20937	+3	4613	7.7	K0	44 39.320	0.03	2	72.238	+4 10 15.52	0.17	2	72.238				16993
20938	+2	4414	5.50	A0	44 41.824	0.03	79	70.932	+2 27 14.43	0.05	77	70.903	1574	30501	4802	81574
20939	-45	14450	8.0	K2	21 44 42.494	0.07	4	70.898	-45 03 25.07	0.08	4	70.898				2597
20940	-61	6587	9.40	G5	44 44.915	0.18	4	70.363	-61 04 02.18	0.25	4	70.363				16996
20941	-60	7505	8.3	K5	44 46.347	0.28	4	70.898	-59 46 44.81	0.28	4	70.898				16997
20942	-28	17454	7.45	K2	44 47.762	0.10	4	71.084	-27 58 59.23	0.20	4	71.084				16999
20943	-31	18466	5.09	A2	44 48.308	0.12	6	70.252	-31 07 50.45	0.10	6	70.252	3741	30509	4804	33741
20944	-80	1029	8.6	K2	21 44 50.764	0.13	4	69.840	-79 46 47.06	0.09	4	69.840				20305
20944	SP				44 50.715	0.21	4	68.671	-79 46 46.67	0.44	4	68.671				20305
20945	-19	6163	8.7	K0	44 54.663	--	1	71.789	-19 03 26.59	--	1	71.789				17001
20946	-47	13928	5.75	G5	45 01.530	0.04	48	71.187	-47 32 01.97	0.05	47	71.139	1573	30516	4807	31573
20947	-36	15019	8.6	K0	45 12.784	0.15	4	70.586	-36 04 24.09	0.08	4	70.586				17002
20948	-26	15812	7.70	G5	21 45 17.615	0.12	3	70.553	-26 06 36.95	0.14	3	70.553				17003
20949	-24	16836	8.5	F0	45 20.561	0.23	3	69.977	-24 17 17.58	0.21	3	69.977				17004
20950	-12	6095	8.8	K0	45 22.419	0.18	2	72.052	-12 22 36.97	0.17	2	72.052				17005
20951	-35	14979	8.8	K5	45 43.089	0.10	4	70.754	-35 26 02.67	0.16	4	70.754				17006
20952	-39	14438	8.0	K0	45 44.955	0.16	4	70.898	-39 18 44.35	0.27	4	70.898				17007

20914 SDS, 8.2m-11.5m, 1"1, 276°.

CATALOG OF 23,001 STARS FOR 1950.0

525

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
20953	-47	13934	8.81	M0	21 45 48.643	0.19	4	70.825	-47 07 03.00	0.22	4	70.825		30524		2598
20954	-75	1732	8.3	K2	45 48.942	0.10	4	70.967	-75 31 53.07	0.06	4	70.967				20306
20954	SP				45 48.847	0.17	4	70.066	-75 31 53.33	0.54	4	70.066				20306
20955	-0	4268	8.5	G5	45 49.076	0.19	2	72.221	-0 01 54.96	0.04	2	72.221		30525		17008
20956	-29	18017	8.2	K0	45 57.501	0.06	3	69.926	-29 35 55.74	0.09	3	69.926				17009
20957	-65	3951	5.65	K0	21 46 08.912	0.10	7	69.851	-64 56 45.27	0.17	6	69.749	3742	30531	4809	33742
20958	-49	13628	8.5	F2	46 11.193	0.07	4	70.639	-49 21 06.41	0.10	4	70.639				2599
20959	-60	7509	8.1	K2	46 13.314	0.09	5	71.201	-60 05 56.14	0.05	5	71.201				17010
20960	-63	4710	7.9	G0	46 16.384	0.14	4	70.618	-63 06 24.75	0.12	4	70.618				17011
20961	-23	17117	8.27	G0	46 17.767	0.09	4	70.366	-23 03 06.96	0.09	4	70.366		30536		17012
20962	+2	4420	8.3	K0	21 46 20.440	0.06	2	72.064	+2 55 31.47	0.13	2	72.064				17013
20963	-63	4712	9.2	K0	46 22.178	0.11	4	70.719	-62 49 13.49	0.08	4	70.719				17014
20964	-6	5837	6.81	K0	46 24.673	0.25	2	72.088	-5 38 12.31	0.23	2	72.088		30538		17015
20965	-15	6075	7.69	A2	46 28.902	0.07	2	71.766	-15 21 14.31	0.03	2	71.766			4810	17016
20966	-70	2873	5.50	K2	46 35.309	0.04	71	71.163	-69 51 48.28	0.05	71	71.163	820	30541	4811	30820
20967	-34	15274	8.5	K5	21 46 45.127	0.03	3	70.214	-33 46 30.45	0.00	3	70.214				17017
20968	-21	6097	8.6	G5	46 52.025	0.13	4	70.689	-20 44 29.27	0.18	4	70.689				17018
20969	-13	6027	6.12	A0	46 58.973	0.01	2	72.064	-12 57 23.75	0.50	2	72.064		30550		17019
20970	-27	15639	7.15	A0	47 01.138	0.06	6	70.202	-27 38 15.47	0.16	6	70.202	3743	30552	4812	33743
20971*	-25	15601	8.2	A0	47 01.913	0.14	4	69.611	-25 23 05.42	0.24	4	69.611				17020
20972	+19	4793	6.16	B3	21 47 06.555	0.15	6	69.732	+20 13 43.63	0.09	6	69.732	3744	30555	4813	33744
20973	-38	14753	9.0	K5	47 09.509	0.21	4	70.505	-38 27 50.86	0.15	4	70.505				17021
20974	-51	13079	9.0	F0	47 09.682	0.17	4	69.449	-51 16 18.15	0.22	4	69.449				2600
20975	-71	2640	8.6	K2	47 11.481	0.19	4	70.794	-71 21 30.54	0.13	4	70.794				20307
20976	-65	3953	9.4	K0	47 12.745	0.20	4	70.888	-65 12 45.45	0.14	4	70.888				20308
20977	-55	9702	7.53	K0	21 47 13.768	0.13	4	70.309	-55 23 57.03	0.10	4	70.309		30558		17022
20978	-60	7511	7.5	K0	47 17.848	0.09	4	69.757	-59 52 43.93	0.04	4	69.757				17023
20979	+4	4753	7.50	K0	47 20.680	0.10	2	72.180	+4 58 44.21	0.13	2	72.180		30559		17024
20980	-12	6104	8.5	K0	47 30.362	--	1	71.732	-11 34 37.78	--	1	71.732				17025
20981	-4	5548	8.7	K0	47 31.926	0.21	2	72.037	-4 31 53.00	0.46	2	72.037				17026
20982	-46	14088	9.0	K0	21 47 31.957	0.24	4	70.083	-46 00 25.19	0.04	4	70.083				2601
20983	+29	4525	5.00	A0	47 37.836	0.08	25	70.676	+29 56 25.70	0.09	25	70.676	1575	30565	4815	81575
20984	-16	5952	8.1	G5	47 38.912	--	1	71.642	-16 25 46.64	--	1	71.642		30567		17027
20985	-1	4209	7.70	F8	47 39.953	--	1	71.707	-0 50 23.83	--	1	71.707		30568		17028
20986	-79	1176	7.50	K2	47 48.929	0.07	4	69.895	-78 48 53.26	0.04	4	69.895		30570		20309
20986	SP				21 47 48.859	0.08	4	70.098	-78 48 52.90	0.15	4	70.098		30573	4817	20309
20987	-9	5854	6.75	K0	47 55.772	0.04	2	71.673	-9 12 59.18	0.02	2	71.673				17029
20988	+0	4784	7.8	K2	47 59.274	--	1	71.699	+0 31 07.26	--	1	71.699				17030
20989	-70	2878	8.1	K0	48 01.399	0.17	4	70.386	-69 41 57.15	0.18	4	70.386				20310
20990	-71	2642	7.96	K0	48 02.472	0.11	4	70.506	-70 47 04.61	0.17	4	70.506		30575		20311
20991	-20	6302	8.7	M2	21 48 09.289	0.12	4	69.194	-20 25 24.05	0.24	4	69.194				17031
20992	-74	2016	8.5	K5	48 15.752	0.19	4	71.586	-74 22 42.03	0.35	4	71.586				20312
20993	-37	14512	9.06	G5	48 22.827	0.15	4	70.489	-37 38 36.55	0.16	4	70.489		30581		17032
20994	-48	14031	8.0	A0	48 24.342	0.04	4	70.546	-48 03 14.16	0.22	4	70.546				2602
20995	-15	6078	9.0	K0	48 24.851	--	1	71.740	-15 02 00.55	--	1	71.740				17033
20996	-10	5774	7.9	G0	21 48 25.297	0.26	2	72.122	-10 16 21.80	0.14	2	72.122				17034
20997	-33	15789	8.6	F5	48 34.518	0.15	4	70.820	-32 46 07.53	0.08	4	70.820				17035
20998	-23	17135	6.85	F8	48 34.583	0.04	50	71.301	-23 30 17.02	0.05	48	71.274	1576	30585	4818	31576
20999	+2	4433	8.9	A5	48 38.721	--	1	71.745	+2 52 19.51	--	1	71.745		30586		17036
21000	-34	15294	9.3	G0	48 44.972	0.12	4	71.291	-34 07 54.82	0.26	3	70.582				17037
21001	-36	15044	8.3	K5	21 48 47.521	0.12	4	71.354	-36 11 12.14	0.26	4	71.354				17038
21002	-2	5646	8.0	K0	48 51.731	0.02	2	72.070	-2 28 40.04	0.17	2	72.070				17039
21003	-14	6144	8.6	F0	48 51.949	0.12	2	72.295	-13 43 49.79	0.22	2	72.295				17040
21004	-8	5755	8.6	G5	48 55.082	--	1	71.797	-7 38 20.73	--	1	71.797				17041
21005	-43	14754	7.5	K2	48 59.359	0.25	4	70.617	-43 12 53.64	0.17	4	70.617		30591		2603
21006	+0	4787	6.86	K0	21 49 00.361	--	1	71.748	+0 32 08.51	--	1	71.748		30592		17043
21007	-30	18873	7.8	F0	49 03.750	0.09	4	71.153	-30 33 07.07	0.15	4	71.153				17044
21008	-50	13504	7.70	F0	49 13.673	0.04	4	70.795	-49 49 21.07	0.18	4	70.795		30596		2604
21009	-74	2018	8.9	K0	49 14.707	0.14	3	69.901	-73 52 54.51	0.13	3	69.901				20313
21010	-41	14669	6.85	K0	49 16.039	0.10	6	71.222	-41 38 52.15	0.06	6	71.222	3746	30598		2605
21011	-57	9976	7.94	K0	21 49 18.558	0.16	4	70.571	-57 34 12.89	0.09	4	70.571		30599		17045
21012	-57	9977	8.21	K2	49 24.290	0.03	4	70.830	-56 52 06.35	0.12	4	70.830		30601		17046
21013	-41	14671	8.2	G0	49 27.149	0.13	3	70.541	-40 48 28.14	0.02	3	70.541				2606
21014	-1	4212	8.7	F8	49 30.039	--	1	72.476	-1 31 12.77	--	1	72.476				17047
21015	+1	4552	8.8	K2	49 33.998	0.19	2	72.220	+1 40 20.95	0.03	2	72.220		30606		17048
21016	-27	15661	7.65	K0	21 49 36.778	0.03	4	70.373	-27 33 02.46	0.17	4	70.373		30608		17049
21017	+0	4790	8.3	K0	49 39.065	--	1	72.493	+1 10 25.58	--	1	72.493				17050
21018	-85	530	9.0	K2	49 44.635	0.16	5	70.349	-84 40 22.25	0.32	5	70.349				20314
21018	SP				49 44.526	0.07	4	70.159	-84 40 22.13	0.17	4	70.159				20314
21019	-3	5316	6.55	A0	49 45.393	--	1	71.655	-3 24 36.24	--	1	71.655		30611		17052
21020	-20	6308	7.9	K2	21 49 53.887	--	1	72.506	-19 45 29.31	--	1	72.506				17054
21021	-42	15670	8.36	K0	49 57.518	0.10	4	71.019	-42 25 37.70	0.07	4	71.019		30614		2607
21022	-77	1523	8.6	M2	50 03.120	0.07	5	70.582	-77 10 38.37	0.56	5	70.582				20315
21022	SP				50 03.170	0.20	4	70.183	-77 10 38.23	0.25	4	70.183				20315
21023	-24	16889	8.5	K0	50 30.751	0.10	4	69.579	-24 17 40.10	0.16	4	69.579				17057

20971 A 15349, SDS, 9.5m-9.7m, 0".1.

No	Dim	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21024	-14	6149	5.18	F0	21 50 34.754	0.08	14	70.938	-13 47 16.74	0.08	14	70.938	1577	30631	4820	31577
21025	-10	5783	8.6	K0	50 41.265	0.01	2	72.116	-10 29 30.65	0.04	2	72.116				17058
21026	-66	3597	8.8	K0	50 42.720	0.18	4	70.359	-66 36 56.65	0.26	4	70.359				20316
21027	+25	4635	5.05	B3	50 47.087	0.21	4	70.857	+25 41 20.89	0.25	4	70.857	823	30635	4822	30823
21028	-22	5786	9.0	A5	50 48.140	0.21	3	69.940	-21 57 16.71	0.02	3	69.940				17059
21029	-53	10189	8.29	F5	21 50 51.706	0.08	4	69.977	-53 21 40.78	0.06	4	69.977		30638		17060
21030	-37	14536	3.16	B8	50 54.606	0.06	21	70.323	-37 36 04.09	0.06	21	70.323	822	30640	4823	30822
21031	-17	6398	8.9	A5	50 56.615	--	1	71.721	-16 59 11.12	--	1	71.721				17061
21032	-15	6087	9.0	G0	50 59.248	--	1	71.748	-15 20 03.84	--	1	71.748				17062
21033	-68	3450	8.2	K2	51 09.268	0.11	4	70.197	-68 05 48.03	0.14	4	70.197				20317
21034	-40	14543	8.5	K2	21 51 13.566	0.16	4	71.286	-40 10 45.11	0.10	4	71.286				2608
21035	-41	14682	7.8	M0	51 17.409	0.17	4	71.085	-41 30 09.43	0.06	4	71.085				2609
21036	-44	14681	9.1	K2	51 19.325	0.11	3	70.593	-44 01 35.64	0.23	2	70.989				2610
21037	-7	5664	8.7	K2	51 19.512	0.17	2	72.246	-6 45 05.80	0.05	2	72.246				17064
21038	-58	7909	8.6	K2	51 30.582	0.05	4	69.655	-58 15 09.75	0.14	4	69.655				17065
21039	-80	1034	7.45	K0	21 51 34.939	0.14	4	70.400	-79 57 29.12	0.10	4	70.400		30658		20318
21039	SP				51 34.792	0.07	4	70.030	-79 57 28.86	0.18	4	70.030		30658		20318
21040	-38	14783	8.32	G5	51 36.548	0.11	4	70.749	-37 40 07.63	0.14	4	70.749		30659		17066
21041	-27	15674	8.6	K5	51 36.966	0.14	3	71.379	-26 52 19.74	0.11	3	71.379				17067
21042	-77	1525	8.6	K0	51 40.576	0.16	4	70.702	-76 52 08.15	0.17	4	70.702				20319
21042	SP				21 51 40.596	0.13	4	70.123	-76 52 07.98	0.26	4	70.123				20319
21043	+3	4630	8.7	F0	51 43.038	0.16	2	71.748	+4 04 29.79	0.18	2	71.748				17068
21044	+12	4710	8.1	M0	51 50.253	0.08	3	71.220	+13 19 14.26	0.18	3	71.220				28163
21045*	-32	16809	9.2	G0	52 09.959	0.23	3	70.217	-32 02 02.27	0.08	3	70.217				17069
21046	-12	6126	8.1	A0	52 20.482	0.10	2	71.974	-12 12 26.63	0.24	2	71.974				17070
21047	-35	15040	8.4	K0	21 52 22.171	0.13	4	71.329	-34 52 58.06	0.14	4	71.329				17071
21048	-4	5570	8.5	K5	52 22.361	0.31	2	71.778	-4 27 25.18	0.37	2	71.778				17072
21049	-42	15687	8.3	G5	52 26.396	0.10	4	70.931	-41 55 43.38	0.12	4	70.931				2611
21050	+2	4441	8.4	K2	52 36.351	--	1	71.519	+2 38 12.72	--	1	71.519				17073
21051	-18	6032	8.9	K0	52 36.644	0.09	2	71.721	-18 28 38.31	0.01	2	71.721				17074
21052	-25	15655	8.6	K0	21 52 39.418	0.18	4	70.615	-25 15 08.91	0.21	4	70.615				17075
21053	-45	14506	7.50	K0	52 40.175	0.03	4	70.581	-45 29 07.38	0.23	4	70.581		30676		2612
21054	-54	9974	9.2	K0	52 40.354	0.12	4	70.755	-54 34 16.20	0.18	4	70.755				17076
21055	-35	15045	9.3	K0	52 43.766	0.09	4	70.908	-35 14 53.41	0.20	4	70.908				17077
21056	-53	10196	6.66	K0	52 44.045	0.09	7	70.417	-52 42 04.20	0.11	6	70.410	3748	30678		33748
21057	-59	7742	8.3	G5	21 52 47.507	0.21	4	69.666	-59 35 19.63	0.21	4	69.666				17078
21058	-21	6120	7.7	M3	52 51.098	0.11	4	69.731	-21 22 38.07	0.06	4	69.731				17079
21059	-61	6597	9.2	K5	52 52.813	0.15	4	70.532	-60 48 24.53	0.18	4	70.532				17080
21060	-33	15817	9.1	F8	52 56.175	0.12	4	70.769	-32 43 23.69	0.13	3	70.798				17081
21061	-56	9711	7.59	K0	52 59.698	0.13	4	70.245	-55 55 43.90	0.09	4	70.245		30684		17082
21062	-33	15819	9.0	K0	21 53 02.143	0.10	4	70.808	-33 26 08.16	0.18	4	70.808				17083
21063	-31	18544	8.0	F5	53 05.145	0.07	4	70.744	-31 09 40.96	0.20	4	70.744				17084
21064	+1	4560	7.12	A2	53 06.079	0.25	2	71.700	+2 07 23.73	0.02	2	71.700		30688		17085
21065	-3	5337	8.8	K0	53 07.287	0.26	2	72.062	-3 00 49.80	0.02	2	72.062				17086
21066	-3	5338	8.2	K5	53 07.758	0.02	2	72.092	-2 52 20.78	0.34	2	72.092				17087
21067	-72	2651	8.6	K0	21 53 15.991	0.14	4	69.464	-72 13 11.45	0.34	4	69.464				20320
21068	-0	4284	8.0	A0	53 18.442	0.32	2	72.538	+0 03 45.41	--	1	71.655				17088
21069	-14	6163	7.8	M2	53 25.034	0.22	2	72.132	-14 16 24.07	0.36	2	72.132				17089
21070	-6	5867	7.7	K0	53 28.009	0.13	2	72.218	-6 04 01.41	0.24	2	72.218				17090
21071*	-7	5669	7.44	B9	53 35.722	0.14	2	72.187	-7 13 04.49	0.26	2	72.187				17091
21072	-10	5794	8.9	G5	21 53 37.815	--	1	71.707	-9 44 37.88	--	1	71.707				17092
21073	-26	15895	7.6	G5	53 39.299	0.20	4	69.914	-25 44 16.50	0.23	4	69.914			4834	17093
21074	-48	14065	8.8	K2	53 41.208	0.14	4	70.127	-48 16 35.72	0.13	4	70.127				2613
21075	-22	5794	8.7	G5	53 42.719	0.09	3	70.216	-22 20 25.43	0.06	3	70.216				17094
21076	-5	5666	8.0	K5	53 43.898	0.02	2	72.262	-4 59 39.38	0.08	2	72.262				17095
21077	-1	4220	8.5	G5	21 53 51.458	--	1	71.699	-0 55 05.29	--	1	71.699				17096
21078	-29	18087	7.9	K0	53 54.569	0.13	4	70.190	-29 03 20.85	0.16	4	70.190				17097
21079*	-35	15054	7.42	A0	53 57.095	0.10	4	70.563	-35 35 53.29	0.05	4	70.563		30705		17098
21080	-18	6037	6.61	A0	54 00.942	0.01	2	72.105	-18 08 07.15	0.31	2	72.105		30706		17099
21081	+20	5046	6.62	K5	54 03.568	0.04	46	71.080	+21 00 05.74	0.05	45	71.028	1579	30710	4835	81579
21082	-27	15695	8.6	F2	21 54 09.079	0.08	4	69.442	-27 15 14.64	0.16	4	69.442				17100
21083	+18	4892	9.0	F2	54 09.480	0.25	4	69.113	+19 26 03.77	0.25	4	69.113				28175
21084	-27	15696	7.64	F5	54 11.146	0.10	4	71.046	-26 43 02.61	0.09	4	71.046		30711		17102
21085	-52	11957	9.0	F2	54 11.240	0.25	4	69.974	-51 51 12.06	0.18	4	69.974				17101
21086	-19	6190	7.73	G5	54 18.617	--	1	70.721	-19 25 42.21	--	1	70.721		30715		17103
21087	-49	13670	8.5	K0	21 54 29.944	0.03	5	70.645	-49 05 01.80	0.06	4	70.873				2614
21088	+11	4696	5.59	A2	54 29.960	0.07	6	69.586	+11 50 17.21	0.18	6	69.586	3751	30719	4836	33751
21089	-55	9733	4.56	F0	54 31.859	0.05	32	70.873	-55 13 53.01	0.07	32	70.873	824	30720	4838	30824
21090	-23	17184	8.3	G0	54 37.026	0.17	4	69.734	-22 55 36.08	0.16	4	69.734				17104
21091	-57	10002	7.41	M0	54 39.903	0.14	4	70.187	-56 56 40.39	0.09	4	70.187		30722		17105
21092	-63	4732	8.6	K5	21 54 40.579	0.10	4	70.062	-62 56 59.34	0.16	4	70.062				17106
21093	-37	14573	7.9	K0	54 43.887	0.11	4	71.066	-36 52 39.42	0.17	4	71.066				17107
21094	+3	4637	9.0	K2	54 45.452	--	1	70.702	+3 59 44.42	--	1	70.702				17108
21095	-72	2652	9.0	K5	54 50.219	0.11	4	70.579	-71 59 17.10	0.27	4	70.579				20321
21096	-64	4190	8.2	K5	54 58.889	0.12	4	70.171	-64 22 10.53	0.22	4	70.171				20322

21045 SDS, 9.9m-10.1m, 0°2, 190°.

21071 A 15459, 7.5m-10.0m, 1°1, 48°.

21079 7.6m-9.2m, 0°5, 302°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
21097	-59	7744	6.26	F5	21 54 59.009	0.10	6	70.982	-59 15 05.13	0.22	6	70.982	3752	30724	4839	33752
21098	-9	5876	6.60	B9	55 00.323	0.03	2	70.758	-8 48 11.62	0.22	2	70.758	3753	30726	4840	17109
21099	-40	14571	8.0	K0	55 10.829	0.10	3	70.701	-40 23 57.51	0.02	3	70.701				2615
21100	-66	3604	8.1	K5	55 19.381	0.09	4	69.860	-66 19 21.18	0.36	4	69.860				20323
21101	-0	4288	8.4	K0	55 19.574	0.18	2	72.489	+0 21 40.54	--	1	71.557				17110
21102	-18	6042	9.0	K0	21 55 20.896	0.21	2	72.206	-17 51 34.33	0.18	2	72.206				17111
21103	-38	14814	8.1	K2	55 24.172	0.15	4	71.009	-38 22 42.54	0.13	4	71.009				17112
21104	-56	9778	9.0	K2	55 25.852	0.20	3	70.085	-56 22 09.15	0.21	3	70.085				17113
21105	-44	14717	6.60	K0	55 27.944	0.01	4	71.024	-44 18 05.70	0.11	4	71.024		30735		2616
21106	-15	6104	9.0	K2	55 28.790	--	1	71.639	-15 19 48.43	--	1	71.639				17114
21107	-30	18941	9.0	F8	21 55 35.216	0.13	4	70.393	-29 58 40.66	0.15	4	70.393				17115
21108	-12	6134	8.5	K0	55 36.432	--	1	71.510	-12 20 28.51	--	1	71.510				17116
21109	-8	5774	9.0	K0	55 42.342	0.49	2	72.273	-7 48 23.82	0.20	2	72.273				17117
21110	-47	13999	8.8	K5	55 47.245	0.18	4	70.125	-47 22 50.22	0.27	4	70.125				2617
21111	-13	6064	7.3	G5	55 47.876	0.12	2	72.220	-13 29 29.48	0.12	2	72.220				17118
21112	-40	14575	8.2	K5	21 55 54.741	0.07	4	70.399	-39 45 43.12	0.18	4	70.399				17119
21113	-21	6131	6.23	M3	55 56.672	0.10	7	70.129	-21 25 20.56	0.09	6	70.074	3757	30746		33757
21114	+3	4644	7.07	F8	55 57.283	0.10	2	72.205	+3 32 19.00	0.30	2	72.205		30747	4844	17120
21115	-20	6332	8.6	F8	56 04.718	0.16	2	72.210	-19 50 56.58	0.24	2	72.210				17121
21116	-0	4289	7.9	K2	56 05.983	0.06	2	71.688	+0 18 00.62	0.45	2	71.688				17122
21117	-46	14147	7.84	K2	21 56 11.321	0.11	4	70.140	-46 34 59.16	0.16	4	70.140		30751		2618
21118	-32	16836	8.42	K5	56 15.777	0.11	4	70.258	-31 47 15.85	0.10	4	70.258		30752		17123
21119	-25	15690	8.4	K5	56 16.650	0.14	4	69.162	-25 35 37.83	0.10	4	69.162				17124
21120	-61	6607	7.65	K2	56 17.066	0.10	4	69.615	-61 00 17.25	0.05	4	69.615		30754		17125
21121	-5	5674	6.42	K0	56 18.539	0.04	63	71.630	-4 36 38.79	0.05	63	71.630	1580	30755	4846	31580
21122	-43	14825	8.0	K2	21 56 18.815	0.13	4	70.578	-43 02 59.21	0.10	4	70.578				2619
21123	-24	16934	8.4	K2	56 23.105	0.06	4	69.662	-24 07 47.73	0.12	4	69.662				17126
21124	-15	6110	8.5	K0	56 27.825	0.33	2	72.111	-14 44 57.91	0.14	2	72.111				17127
21125	-20	6336	8.8	A5	56 32.407	0.08	4	69.841	-20 14 38.82	0.10	4	69.841				17128
21126	-37	14586	7.9	K5	56 33.539	0.09	4	70.389	-37 30 33.24	0.38	4	70.389				17129
21127	-53	10215	8.7	K0	21 56 35.044	0.21	4	70.688	-53 26 51.14	0.13	4	70.688				17130
21128	-6	5881	8.6	A2	56 40.976	0.25	2	72.056	-5 42 57.67	0.10	2	72.056				17131
21129	-17	6412	8.8	G0	56 41.316	0.21	2	71.176	-17 33 00.97	0.15	2	71.176				17132
21130	-28	17533	7.46	F0	56 43.079	0.14	4	69.344	-27 52 13.52	0.10	4	69.344		30763		17133
21131	-64	4194	7.6	K2	56 44.055	0.10	4	69.593	-63 40 17.66	0.18	4	69.593				17134
21132	-2	5673	8.7	A2	21 56 47.544	--	1	71.516	-1 37 12.99	--	1	71.516				17135
21133	-35	15078	8.6	F0	56 55.156	0.16	4	70.398	-35 20 23.99	0.24	4	70.398				17136
21134	-35	15079	8.1	K5	56 56.016	0.09	4	70.418	-34 47 26.32	0.14	4	70.418				17137
21135	-6	5884	8.0	K0	57 01.419	0.06	2	71.755	-6 30 49.54	0.23	2	71.755		30769		17138
21136	-54	9993	8.1	K0	57 14.814	0.09	4	69.226	-54 21 06.39	0.15	4	69.226				17139
21137	-52	11963	8.2	F2	21 57 17.098	0.13	4	69.942	-51 43 58.00	0.08	4	69.942				2620
21138	-50	13554	9.3	K0	57 25.193	0.12	4	70.080	-50 16 31.61	0.10	4	70.080				2621
21139	+6	4940	5.99	B3	57 38.015	0.11	6	68.999	+6 28 37.21	0.17	6	68.999	3759	30779	4849	33759
21140	-13	6070	8.8	K2	57 43.105	0.02	2	71.720	-13 05 38.37	0.37	2	71.720				17140
21141	-21	6145	8.5	K0	57 44.286	0.21	4	69.947	-21 03 34.38	0.12	4	69.947				17141
21142	-34	15359	8.6	K2	21 57 47.066	0.09	5	71.179	-33 44 55.46	0.10	4	71.541				17142
21143	+0	4807	8.2	G5	57 55.211	0.06	2	71.777	+0 58 35.64	0.06	2	71.777				17143
21144	-9	5884	8.7	G5	57 55.955	--	1	71.510	-8 45 59.84	--	1	71.510				17144
21145	-39	14526	8.7	F5	58 00.358	0.10	4	70.597	-39 08 02.74	0.17	4	70.597				17145
21146	-27	15729	8.5	K0	58 02.026	0.11	4	71.107	-26 45 57.05	0.15	4	71.107				17146
21147	+2	4457	8.7	F5	21 58 08.716	0.10	2	71.461	+2 33 05.29	0.55	2	71.461				17147
21148	-48	14086	9.1	K0	58 09.705	0.16	4	70.621	-48 27 07.06	0.19	4	70.621				2622
21149	-76	1542	5.91	F2	58 14.004	0.14	6	69.642	-76 21 33.73	0.20	6	69.642	3760	30788	4850	33760
21149 SP					58 13.932	0.08	6	68.665	-76 21 33.33	0.20	6	68.665	3760	30788	4850	53760
21150	-65	3985	7.39	K0	58 20.251	0.08	4	69.675	-65 28 48.90	0.19	4	69.675		30792		20324
21151	-28	17550	8.85	F5	21 58 22.715	0.10	4	70.061	-28 33 55.63	0.31	4	70.061		30793		17148
21152	-25	15714	7.90	K0	58 23.128	0.10	4	69.850	-25 15 04.52	0.07	4	69.850		30794		17149
21153	-12	6150	8.7	F0	58 31.473	0.16	2	70.777	-11 35 04.26	0.07	2	70.777				17150
21154	+12	4737	5.66	F2	58 39.178	0.03	94	71.145	+12 52 45.37	0.04	91	71.070	826	30803	4853	80826
21155	-36	15144	8.7	G5	58 46.696	0.12	4	70.536	-36 33 03.60	0.07	4	70.536				17151
21156	-32	16862	9.3	F5	21 58 54.435	0.13	4	71.336	-32 18 07.58	0.27	4	71.336				17152
21157	-3	5361	8.8	K0	58 58.059	0.02	2	71.645	-2 42 29.71	0.05	2	71.645				17153
21158	-68	3456	9.1	G5	58 59.761	0.18	4	70.117	-68 36 59.16	0.53	4	70.117				20325
21159	-58	7919	8.7	F8	59 01.373	0.19	4	69.687	-58 32 08.06	0.25	4	69.687				17154
21160	-47	14028	8.0	K2	59 10.027	0.10	4	70.873	-47 23 14.55	0.26	4	70.873				2623
21161*	-10	5812	8.3	G0	21 59 10.757	0.07	2	71.293	-10 06 58.11	0.19	2	71.293				17155
21162	-4	5597	8.6	F8	59 13.092	0.16	2	72.130	-3 50 21.96	0.17	2	72.130				17156
21163	-1	4234	8.8	K0	59 21.125	0.29	2	72.161	-0 33 54.60	0.24	2	72.161				17157
21164	-42	15742	8.0	K0	59 24.053	0.13	4	70.407	-42 19 32.68	0.30	4	70.407				2624
21165	-18	6056	6.38	G5	59 27.016	0.11	7	70.739	-18 08 40.54	0.13	6	70.785	3761	30816	4854	33761
21166	+3	4650	8.4	K5	21 59 31.315	--	1	71.530	+4 13 39.16	--	1	71.530				17158
21167	-32	16868	6.68	F5	59 38.314	0.09	6	71.157	-32 22 32.54	0.15	6	71.157	3762	30819		33762
21168	-57	10015	4.74	K5	59 43.276	0.05	40	71.139	-57 00 27.45	0.07	40	71.139	825	30817	4855	30825
21169	-40	14618	8.0	K2	59 46.121	0.06	4	71.014	-39 53 53.14	0.24	4	71.014				2625
21170	-31	18610	9.0	K2	59 48.630	0.13	4	69.656	-30 57 14.39	0.03	4	69.656				17159

21161 8.8m-8.8m, 0°2, 215°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
21171	-27	15743	7.04	K0	21 59 50.383	0.10	4	69.524	-27 36 32.29	0.07	4	69.524		30824		17160
21172	-51	13151	9.5	G0	59 50.606	0.16	4	70.856	-51 03 17.94	0.21	4	70.856				2626
21173	-50	13566	7.99	K0	59 52.582	0.08	4	70.169	-50 33 30.85	0.10	4	70.169		30826		2627
21174	-1	4236	7.6	K2	59 58.712	0.06	2	71.740	-1 09 37.29	0.07	2	71.740		30827	4856	17161
21175	-43	14856	8.5	K0	22 00 02.434	0.16	4	70.617	-43 28 27.52	0.10	4	70.617				2628
21176	-58	7920	8.6	K0	22 00 12.065	0.29	3	70.360	-58 29 40.04	0.07	3	70.360				17162
21177	-3	5363	8.3	G0	00 13.232	0.12	2	71.469	-2 43 12.54	0.49	2	71.469				17163
21178	+15	4548	6.72	A0	00 14.091	0.04	6	71.093	+15 44 41.28	0.15	6	71.093	3764	30835		33764
21179	-4	5603	8.9	F2	00 16.593	0.01	2	71.303	-3 42 50.21	0.03	2	71.303				17164
21180	-35	15109	9.1	K0	00 20.608	0.07	4	70.575	-35 01 17.01	0.12	4	70.575				17165
21181	-39	14544	8.7	G5	22 00 22.840	0.15	4	70.362	-38 59 43.54	0.19	4	70.362				17166
21182	-61	6615	8.6	K5	00 24.793	0.22	4	70.326	-61 05 23.90	0.12	4	70.326				17167
21183	-26	15946	9.0	A0	00 30.494	0.09	4	69.908	-25 53 37.65	0.15	4	69.908				17168
21184	+2	4465	8.0	K2	00 35.779	0.04	2	70.777	+2 56 25.27	0.04	2	70.777				17169
21185	-62	6294	7.9	K0	00 42.605	0.06	4	70.300	-62 06 54.76	0.02	4	70.300				17170
21186	-2	5681	4.66	B5p	22 00 43.726	0.10	6	70.667	-2 23 51.37	0.09	6	70.667	3765	30844	4857	33765
21187	-29	18148	7.32	A0	00 46.696	0.07	4	69.565	-29 35 20.56	0.14	4	69.565		30845		17171
21188	-65	3989	7.26	A2	00 54.834	0.06	6	70.203	-64 58 14.37	0.13	6	70.203	3766	30847		33766
21189	-8	5791	8.6	M0	01 00.803	0.13	2	70.767	-8 01 37.43	0.25	2	70.767				17172
21190	-56	9801	8.9	K2	01 03.276	0.10	4	70.376	-56 08 00.50	0.20	4	70.376				17173
21191	-61	6616	8.9	K0	22 01 12.749	0.21	4	70.075	-60 42 27.64	0.04	4	70.075				17174
21192*	-53	10235	8.4	K2	01 14.931	0.06	4	70.340	-52 46 51.79	0.11	4	70.340				17175
21193	-13	6085	7.43	A0	01 24.581	0.06	2	71.274	-13 15 44.42	0.37	2	71.274		30854	4858	17176
21194	-18	6061	8.3	K0	01 26.663	0.08	2	71.291	-18 03 19.47	0.03	2	71.291				17177
21195	-16	6012	8.5	K0	01 28.861	0.24	2	71.963	-16 24 19.91	0.21	2	71.963				17178
21196	-83	729	8.2	K0	22 01 31.315	0.13	4	70.362	-82 52 40.46	0.11	4	70.362				20326
21196 SP					01 31.357	0.12	4	69.147	-82 52 40.27	0.22	4	69.147				20326
21197	-26	15959	6.97	K0	01 40.078	0.16	4	69.899	-26 07 35.25	0.14	4	69.899		30860		17179
21198	-46	14189	8.0	K2	01 41.360	0.20	4	70.646	-45 59 57.86	0.07	4	70.646				2629
21199	-87	317	8.14	A0	01 42.557	0.23	6	70.993	-86 43 29.76	0.15	6	70.993		30861		20327
21199 SP					01 42.677	0.14	4	70.118	-86 43 29.38	0.13	4	70.118		30861		20327
21200	-36	15166	7.7	M0	01 44.962	0.09	4	70.577	-35 56 22.24	0.20	4	70.577				17180
21201	-15	6133	8.2	K2	01 45.651	0.12	2	72.044	-14 41 23.61	0.28	2	72.044				17181
21202	-27	15757	5.84	B5	01 46.383	0.14	7	69.954	-27 03 55.15	0.09	6	69.869	3767	30862	4860	33767
21203	-9	5908	7.22	F0	01 52.623	0.07	2	72.149	-8 57 35.50	0.10	2	72.149		30864		17182
21204	-33	15900	8.8	K2	22 01 52.803	0.17	3	70.885	-32 47 47.17	0.36	3	70.885				17183
21205	-5	5697	8.0	F0	01 58.388	0.20	2	72.135	-5 04 59.43	0.01	2	72.135		30867		17184
21206	-24	16978	8.5	G0	02 01.639	0.05	4	69.849	-23 58 22.02	0.14	4	69.849				17185
21207	-22	5828	8.38	K0	02 06.907	0.09	4	69.594	-22 29 17.02	0.09	4	69.594		30871		17186
21208	-19	6212	8.7	G5	02 07.185	0.03	2	72.179	-19 19 07.38	0.01	2	72.179				17187
21209	-42	15754	8.0	K2	22 02 08.460	0.14	4	70.790	-41 48 22.89	0.16	4	70.790				2630
21210	-49	13717	7.99	A3	02 15.403	0.10	4	70.494	-48 57 42.51	0.21	4	70.494		30873		2631
21211	-37	14642	8.6	G5	02 16.553	0.27	4	71.367	-37 33 29.90	0.13	4	71.367				17188
21212	-66	3615	7.53	G5	02 18.243	0.10	4	68.977	-65 54 42.13	0.13	4	68.977		30875		20328
21213	-63	4748	8.6	K0	02 18.272	0.13	4	69.957	-63 21 32.43	0.04	4	69.957				17189
21214	-28	17587	8.4	K0	22 02 19.909	0.18	4	69.645	-28 25 30.78	0.12	4	69.645				17190
21215	+3	4657	8.7	F5	02 20.351	0.01	2	71.763	+3 43 53.97	0.37	2	71.763				17191
21216	-35	15132	8.5	K0	02 24.952	0.23	3	70.602	-35 24 26.04	0.13	3	70.602				17192
21217	-7	5695	8.2	A0	02 25.913	0.42	2	71.709	-6 32 44.94	0.30	2	71.709				17193
21218	-39	14561	9.0	K5	02 36.970	0.15	4	71.416	-38 39 19.96	0.09	4	71.416				17194
21219	-31	18636	8.2	G0	22 02 42.280	0.07	4	70.323	-30 57 05.51	0.15	4	70.323				17195
21220	-2	5689	8.3	F8	02 44.939	0.09	2	71.176	-1 40 03.50	0.10	2	71.176		30885		17196
21221	-74	2028	9.1	F8	02 47.201	0.05	4	69.891	-74 19 48.60	0.05	4	69.891				20329
21222	-0	4303	7.8	A3	02 50.003	0.12	2	72.088	+0 01 03.62	0.29	2	72.088				17197
21223	-83	730	7.41	K0	02 51.312	0.08	4	69.928	-83 36 11.53	0.14	4	69.928		30886		20330
21223 SP					02 51.224	0.12	4	70.544	-83 36 11.14	0.18	4	70.544		30886		20330
21224	-34	15401	8.3	K2	02 51.822	0.12	4	71.229	-33 52 51.45	0.17	4	71.229				17198
21225	-45	14572	7.7	F0	02 57.558	0.06	5	71.713	-44 46 51.77	0.21	5	71.713				2632
21226	-44	14763	7.00	K0	02 58.931	0.08	4	70.913	-44 12 35.47	0.12	4	70.913		30891		2633
21227	-19	6217	7.54	A3	03 03.333	0.12	2	72.042	-18 54 43.61	0.13	2	72.042			4865	17199
21228	-35	15140	8.4	K5	22 03 05.274	0.13	4	70.457	-34 38 36.41	0.12	4	70.457				17200
21229	-40	14639	4.60	K2	03 06.420	0.04	39	71.159	-39 47 10.54	0.05	38	71.100	1581	30892	4866	31581
21230	+0	4818	8.9	G5	03 11.004	0.19	2	72.112	+0 33 43.78	0.08	2	72.112				17201
21231	-49	13721	8.0	K0	03 12.385	0.29	3	71.098	-48 43 39.96	0.21	3	71.098				2634
21232	-1	4246	3.19	G0	03 12.972	0.04	29	71.667	-0 33 48.83	0.05	29	71.667	827	30896	4868	30827
21233	+28	4284	5.58	A0	22 03 18.607	0.13	6	69.736	+28 43 13.23	0.13	6	69.736	3768	30899	4869	33768
21234	-72	2662	8.9	K2	03 20.947	0.07	3	69.888	-71 52 02.28	0.04	3	69.888				20331
21235	+1	4580	8.8	M0	03 21.491	0.52	2	72.558	+2 01 19.41	-	1	71.696				17202
21236	-3	5375	8.2	K2	03 26.793	0.09	2	71.185	-3 20 59.64	0.32	2	71.185				17203
21237	-32	16903	8.1	M0	03 41.401	0.11	4	70.249	-31 48 49.42	0.19	4	70.249				17204
21238	-14	6209	4.35	B8	22 03 44.367	0.07	12	70.676	-14 06 48.07	0.09	12	70.676	828	30914	4871	30828
21239	-14	6210	8.8	G5	03 46.450	-	1	71.510	-14 19 53.84	-	1	71.510				17205
21240	-41	14757	7.8	G5	03 59.030	0.07	4	70.880	-41 22 39.15	0.16	4	70.880				2635
21241	+4	4804	7.60	A0	04 02.568	0.19	2	72.147	+4 57 01.35	0.10	2	72.147		30921		17206
21242	-43	14892	8.5	K2	04 04.749	0.15	3	70.545	-42 44 45.69	0.24	3	70.545				2636

21192 8.6 ϵ_a -10.2m, 0 $^\circ$ 4, 130 $^\circ$.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
21243	+ 1	4584	6.54	B9	22 04 06.355	0.22	2	72.238	+ 2 11 42.67	0.28	2	72.238		30922		17207
21244	-57	10038	8.4	G5	04 16.684	0.12	4	70.445	-57 05 44.16	0.19	4	70.445				17209
21245	-28	17600	8.6	K0	04 18.504	0.19	4	70.949	-28 17 31.99	0.12	4	70.949				17210
21246	-22	5833	6.89	G5	04 28.159	0.15	4	70.825	-22 29 07.61	0.20	4	70.825		30927	4872	17211
21247	-11	5756	7.00	M3	04 38.381	--	1	71.710	-10 41 29.71	--	1	71.710		30930		17212
21248	-20	6362	8.0	K0	22 04 40.138	--	1	72.506	-19 48 53.13	--	1	72.506				17213
21249	+24	4533	3.96	F5	04 41.304	0.06	34	70.915	+25 06 01.20	0.09	34	70.915	831	30932	4873	80831
21250	-39	14579	8.7	K5	04 49.631	0.14	4	71.388	-38 59 59.39	0.10	4	71.388				17214
21251	-71	2660	8.8	K5	04 51.591	0.10	4	70.369	-70 46 01.51	0.15	4	70.369				20332
21252	-21	6166	7.47	K0	04 52.367	0.19	4	70.124	-21 00 13.83	0.15	4	70.124			4874	17215
21253	- 6	5912	7.9	K0	22 05 04.465	--	1	71.655	- 6 04 25.18	--	1	71.655		30941		17216
21254	-47	14063	2.16	B5	05 05.727	0.03	70	70.918	-47 12 17.45	0.03	69	70.924	829	30942	4875	30829
21255	-10	5837	7.46	K0	05 06.901	--	1	71.718	-10 19 23.98	--	1	71.718		30946		17217
21256	-18	6072	8.4	K0	05 08.278	--	1	71.737	-18 10 33.73	--	1	71.737				17218
21257	-16	6027	8.5	K5	05 09.450	--	1	70.792	-16 14 47.31	--	1	70.792				17219
21258	-37	14662	8.7	G5	22 05 14.041	0.13	4	70.388	-36 51 12.75	0.10	4	70.388				17220
21259	-48	14138	9.2	K0	05 14.133	0.08	3	71.480	-47 45 43.15	0.10	2	70.510				2637
21260	-59	7768	7.87	K5	05 16.825	0.16	4	71.617	-59 31 50.53	0.17	4	71.617		30948		17221
21261	-64	4214	7.56	K2	05 18.302	0.21	4	70.651	-64 08 03.72	0.38	3	69.723		30949		20333
21262	-45	14587	8.2	F5	05 21.242	0.18	5	71.343	-44 58 13.37	0.18	5	71.343				2638
21263	-24	17016	8.5	G5	22 05 27.051	0.14	4	71.145	-23 58 38.64	0.13	4	71.145				17222
21264	-33	15922	4.62	A2	05 28.407	0.03	68	70.840	-33 14 00.50	0.04	67	70.802	832	30954	4877	30832
21265	- 4	5617	7.5	B9	05 36.101	--	1	71.620	- 3 46 35.31	--	1	71.620				17223
21266	-38	14904	7.8	K0	05 51.390	0.06	4	71.184	-38 01 28.85	0.29	4	71.184				17226
21267	-38	14903	9.4	K0	05 52.738	0.06	3	70.772	-37 40 20.48	0.15	3	70.772				17227
21268	-12	6185	7.8	K0	22 05 53.751	--	1	71.680	-11 51 30.83	--	1	71.680				17228
21269	-26	15998	7.06	A2	05 56.670	0.14	4	70.796	-26 00 55.95	0.26	4	70.796		30967		17229
21270	-52	11987	9.1	K5	06 00.711	0.07	4	70.366	-52 03 12.61	0.07	4	70.366				17230
21271	-14	6218	6.90	F5	06 05.891	--	1	71.677	-13 32 44.48	--	1	71.677		30971		17231
21272	- 0	4310	8.7	F5	06 06.569	--	1	71.776	- 0 11 03.95	--	1	71.776				17232
21273	-19	6227	5.74	B3	22 06 14.592	0.33	2	71.196	-18 45 54.53	0.42	2	71.196		30977		17233
21274	+ 2	4473	8.4	K2	06 24.053	0.13	2	70.655	+ 2 50 12.71	0.03	2	70.655				17234
21275	- 7	5713	8.6	A0	06 38.086	0.36	2	72.129	- 7 29 13.02	0.28	2	72.129				17235
21276	- 8	5817	6.99	G5	06 48.408	0.24	2	72.196	- 8 25 55.23	0.41	2	72.196		30989		17236
21277	-40	14669	8.8	K0	06 48.469	0.13	4	70.809	-39 52 04.40	0.13	4	70.809				17237
21278	+ 0	4829	8.8	K0	22 06 49.586	--	1	71.745	+ 1 22 31.59	--	1	71.745				17238
21279	-76	1548	9.0	K0	06 51.473	0.04	4	69.835	-76 17 34.13	0.15	4	69.835				20334
21279	SP				06 51.496	0.20	4	69.667	-76 17 33.89	0.24	4	69.667				20334
21280	- 9	5927	8.7	F2	06 51.771	--	1	71.721	- 9 02 47.04	--	1	71.721				17239
21281	-30	19033	8.9	F8	06 59.165	0.06	4	69.865	-30 22 56.99	0.15	4	69.865				17240
21282	- 2	5705	8.7	M0	22 07 00.550	--	1	71.710	- 2 16 01.36	--	1	71.710				17241
21283	-15	6151	9.0	K0	07 01.247	--	1	71.655	-14 48 25.39	--	1	71.655				17242
21284	-33	15939	8.3	K0	07 03.841	0.14	4	71.031	-32 50 18.85	0.11	4	71.031				17243
21285	-71	2663	8.41	K0	07 04.177	0.18	4	69.596	-71 06 49.95	0.12	4	69.596		31000		20335
21286	-28	17622	6.46	A3	07 09.417	0.05	4	69.904	-28 32 19.71	0.06	4	69.904		31001		17244
21287	-64	4221	8.9	K0	22 07 12.005	0.10	4	68.966	-63 48 57.19	0.23	4	68.966				17245
21288	-66	3630	8.5	G0	07 19.113	0.15	4	69.401	-66 35 15.12	0.18	4	69.401				20336
21289	+ 3	4672	7.62	G0	07 29.123	0.07	2	71.656	+ 3 51 09.54	0.04	2	71.656		31008		17246
21290	-21	6170	8.8	K0	07 32.411	0.05	4	69.595	-21 14 23.74	0.18	4	69.595				17247
21291	- 5	5720	8.2	G0	07 35.396	0.17	2	72.141	- 5 10 30.80	0.28	2	72.141				17248
21292*	-34	15438	7.5	G0	22 07 37.620	0.14	4	70.355	-34 04 24.12	0.19	4	70.355				17249
21293	-49	13750	8.92	F8	07 39.176	0.14	4	70.413	-49 08 13.50	0.06	4	70.413		31012		2639
21294	+ 5	4961	3.70	A2	07 40.995	0.03	78	71.542	+ 5 57 04.71	0.04	76	71.532	834	31013	4884	30834
21295	-10	5851	8.3	G5	07 42.904	0.10	2	71.274	- 9 38 02.78	0.13	2	71.274				17250
21296	-40	14676	9.0	K0	07 45.213	0.05	4	70.401	-40 29 56.68	0.09	4	70.401				2640
21297	-61	6623	8.8	K5	22 07 51.065	0.10	4	69.159	-61 32 18.46	0.13	4	69.159				17251
21298	-12	6196	5.40	B5	07 57.226	0.04	6	69.803	-11 48 41.77	0.13	6	69.803	3771	31021	4887	33771
21299	-57	10057	9.0	G5	07 57.970	0.12	4	69.409	-56 39 50.51	0.11	4	69.409				17252
21300	-68	3467	8.7	M1	08 02.615	0.15	4	70.244	-68 11 13.98	0.04	4	70.244				20337
21301	+20	5093	6.40	A2	08 08.240	0.06	6	69.486	+20 43 53.51	0.12	6	69.486	3772	31025	4888	33772
21302	+10	4701	5.92	K5	22 08 10.081	0.05	6	69.455	+11 22 42.29	0.27	6	69.455	3773	31026		33773
21303	-26	16016	9.0	K2	08 12.813	0.20	4	70.316	-26 05 14.89	0.10	4	70.316				17253
21304	-44	14805	6.68	G5	08 23.468	0.08	4	70.658	-44 05 22.67	0.09	4	70.658		31031		2641
21305	-23	17292	8.6	K0	08 24.555	0.11	4	68.946	-22 42 40.73	0.12	4	68.946				17254
21306	-35	15192	9.0	G5	08 30.335	0.22	4	70.209	-35 11 12.20	0.14	4	70.209				17255
21307	-73	2249	9.4	F0	22 08 39.855	0.14	4	69.914	-73 17 40.49	0.23	4	69.914				20338
21308	-48	14152	8.0	K2	08 54.042	0.05	4	71.264	-48 24 52.27	0.16	4	71.264				2642
21309	-43	14932	8.0	M0	08 59.569	0.15	4	70.730	-43 22 54.64	0.16	4	70.730				2643
21310	-32	16945	9.3	F8	08 59.628	0.15	4	70.760	-32 09 16.62	0.11	4	70.760				17256
21311	-70	2903	9.1	G0	09 03.696	0.32	4	69.874	-69 55 59.10	0.26	4	69.874				20339
21312	-50	13604	9.0	K0	22 09 04.666	0.09	4	70.569	-49 57 26.58	0.08	4	70.569				2644
21313	-56	9832	9.0	K0	09 05.888	0.19	4	70.974	-55 46 16.96	0.24	4	70.974				17257
21314	- 1	4261	8.49	K0	09 13.244	0.10	2	70.520	- 1 29 32.74	0.01	2	70.520		31047		17258
21315f	-62	6311	9.0	G0	09 28.586	0.18	4	69.663	-62 13 44.77	0.35	4	69.663				17259
21316	-14	6228	8.31	F5	09 30.282	0.12	2	71.288	-14 28 21.36	0.11	2	71.288		31055		17260

21292 SDS, 7.8m-10.8m, 1°6, 324°.

21315 SDS, 11.0m, 2°4, 292°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Deci 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
21317	-7	5725	8.5	G5	22 09 41.928	0.30	2	70.796	-7 18 43.84	0.12	2	70.796				17261
21318	-43	14935	8.5	A2	09 42.881	0.10	4	70.388	-42 46 53.55	0.15	4	70.388				2645
21319	+2	4476	7.02	F0	09 45.199	0.01	2	71.151	+2 29 11.01	0.29	2	71.151		31062	4891	17262
21320	-27	15821	7.44	K0	09 47.465	0.12	4	69.227	-27 19 57.07	0.09	4	69.227		31063		17263
21321	-18	6084	8.7	G0	09 49.370	0.25	2	71.681	-18 16 29.51	0.01	2	71.681				17264
21322	-67	3867	7.6	K2	22 09 52.483	0.12	4	69.458	-67 01 48.64	0.15	4	69.458				20340
21323	-11	5778	8.5	A0	09 59.021	0.04	2	72.037	-10 40 24.86	0.08	2	72.037				17265
21324	-79	1195	8.9	K0	10 00.244	0.16	3	69.584	-79 36 04.86	0.19	4	69.557				20341
21324	SP				10 00.245	0.16	4	69.216	-79 36 04.36	0.38	4	69.216				20341
21325	-7	5727	7.37	G0	10 05.811	0.01	2	71.992	-6 43 00.46	0.05	2	71.992		31072		17266
21326	-30	19062	8.7	K2	22 10 15.595	0.17	4	71.193	-29 47 09.28	0.06	4	71.193				17267
21327	-27	15823	7.7	K0	10 16.105	0.08	4	70.162	-26 44 38.43	0.08	4	70.162				17268
21328	-17	6463	8.8	F0	10 23.823	0.11	2	71.640	-16 52 10.42	0.31	2	71.640				17269
21329	+2	4477	8.7	K2	10 31.231	0.17	2	72.182	+3 06 05.21	0.01	2	72.182				17270
21330	-4	5635	8.8	K0	10 36.274	0.13	2	72.224	-4 07 13.23	0.01	2	72.224				17271
21331	-41	14798	8.6	F8	22 10 36.915	0.10	4	71.141	-41 23 04.27	0.15	4	71.141				2646
21332	-36	15267	8.5	G5	10 38.718	0.06	4	70.158	-35 59 29.25	0.06	4	70.158				17272
21333	-57	10070	7.8	M0	10 41.567	0.16	4	70.244	-57 27 59.96	0.13	4	70.244				17273
21334	-3	5403	9.0	K5	10 43.520	--	1	71.699	-2 58 53.56	--	1	71.699				17274
21335	-0	4322	7.5	K5	10 46.525	0.30	2	72.073	-0 00 20.84	0.07	2	72.073				17275
21336	-46	14241	7.5	K0	22 10 47.443	0.09	4	70.882	-46 03 16.80	0.26	4	70.882				2647
21337	-2	5714	7.4	K2	10 50.377	0.28	2	72.135	-1 54 04.75	0.23	2	72.135				17276
21338	-31	18699	8.5	G5	10 53.229	0.04	5	71.333	-31 06 16.56	0.08	4	70.811				17277
21339	-60	7554	9.1	K0	10 58.878	0.10	4	69.594	-60 20 02.04	0.17	4	69.594				17278
21340	-32	16959	9.14	F5	11 01.208	0.23	3	70.014	-31 45 01.67	0.19	3	70.014		31089		17279
21341	-4	5637	8.5	G5	22 11 06.317	--	1	71.702	-4 01 24.81	--	1	71.702				17280
21342	-22	5862	8.5	G5	11 06.413	0.14	3	69.999	-22 30 43.86	0.19	3	69.999				17281
21343	-45	14632	8.83	G0	11 08.567	0.16	4	70.541	-44 57 40.86	0.20	4	70.541		31091		2648
21344	-59	7780	8.5	K2	11 13.502	0.18	4	69.596	-59 32 26.56	0.07	4	69.596				17282
21345	-25	15816	7.7	K0	11 14.053	0.41	3	71.083	-24 52 24.08	0.66	3	71.083				17283
21346	-5	5738	7.29	K0	22 11 15.276	0.60	2	72.276	-4 41 58.93	0.62	2	72.276		31092		17284
21347	+0	4837	8.1	F8	11 16.924	0.03	2	72.287	+0 37 41.96	0.47	2	72.287				17285
21348	+0	4838	8.2	K0	11 17.156	0.06	2	72.284	+1 21 38.26	0.15	2	72.284				17286
21349*	-54	10038	8.2	F0	11 17.474	0.14	4	70.037	-53 49 25.58	0.13	4	70.037				17287
21350	-28	17653	5.40	B9	11 28.983	0.03	80	71.042	-28 00 55.74	0.03	79	71.012	838	31095	4894	80838
21351	-38	14945	8.6	K0	22 11 29.941	0.24	4	70.587	-38 02 27.41	0.05	4	70.587				17288
21352	-29	18244	8.4	K2	11 34.227	0.28	4	71.166	-29 21 05.36	0.09	4	71.166				17289
21353	-19	6249	7.14	F5	11 36.097	--	1	72.798	-19 29 49.91	--	1	72.798		31101		17290
21354	+3	4684	8.6	K0	11 40.118	--	1	71.745	+4 13 22.17	--	1	71.745				17291
21355	-12	6218	8.3	G5	11 50.298	--	1	69.538	-12 30 09.71	--	1	69.538				17293
21356	-33	15978	9.2	G5	22 11 55.225	0.15	4	70.611	-33 23 31.78	0.10	4	70.611				17294
21357	-16	6046	6.60	G5	11 55.880	0.04	46	70.967	-16 03 51.85	0.05	46	70.967	1582	31109	4899	31582
21358	-24	17081	6.83	F5	11 59.745	0.06	4	70.207	-24 15 12.39	0.14	4	70.207		31112		17296
21359	-54	10040	8.5	F0	12 05.189	0.04	4	69.905	-54 13 50.50	0.22	4	69.905				17297
21360	-49	13781	8.0	G5	12 06.542	0.14	4	70.792	-48 56 34.89	0.12	4	70.792				2649
21361	-47	14119	9.0	K0	22 12 13.533	0.07	4	71.320	-47 01 38.65	0.14	4	71.320				2650
21362	+3	4687	7.06	K0	12 15.313	0.23	2	72.088	+4 02 00.56	0.10	2	72.088		31117	4900	17299
21363	-39	14639	9.0	K0	12 18.568	0.07	4	70.987	-39 23 24.05	0.15	4	70.987				17300
21364	-26	16043	7.6	K5	12 19.458	0.07	4	70.915	-25 53 49.01	0.14	4	70.915				17301
21365	-20	6392	8.7	K0	12 20.297	0.17	4	71.085	-20 08 40.18	0.07	4	71.085				17302
21366	-2	5720	8.0	K0	22 12 28.263	0.09	2	72.198	-2 18 29.03	0.21	2	72.198				17303
21367	-41	14810	4.86	G0	12 36.673	0.07	6	69.184	-41 35 46.27	0.10	6	69.184	3777	31125	4902	33777
21368	-52	12000	8.26	K2	12 37.968	0.08	4	70.637	-52 24 27.95	0.09	4	70.637		31126		17304
21369	-79	1196	8.5	K2	12 42.680	0.09	4	69.878	-78 40 49.99	0.14	4	69.878				20342
21369	SP				12 42.683	0.17	4	70.056	-78 40 49.87	0.14	4	70.056				20343
21370	-80	1048	8.9	K0	22 12 43.978	0.07	4	70.467	-80 28 44.54	0.25	4	70.467				20343
21370	SP				12 43.978	0.25	4	70.157	-80 28 44.71	0.14	4	70.157				2651
21371	-46	14253	8.5	K5	12 45.310	0.03	3	70.697	-46 03 54.16	0.11	3	70.697				20344
21372	-68	3475	8.4	K0	12 46.811	0.17	4	70.925	-68 35 44.43	0.27	4	70.925				2652
21373	-51	13223	8.8	A0	12 49.285	0.13	4	69.847	-51 33 12.05	0.17	4	69.847				17305
21374	-21	6186	8.5	K0	22 12 55.176	0.14	4	71.442	-21 31 33.54	0.07	4	71.442				2653
21375	-43	14963	8.0	K5	12 55.266	0.13	4	71.564	-42 56 46.54	0.10	4	71.564				17306
21376	-9	5943	8.6	F8	12 55.817	0.00	2	72.156	-8 38 48.99	0.31	2	72.156				17307
21377	-37	14710	9.0	G5	12 58.259	0.06	4	71.451	-37 09 10.35	0.10	4	71.451				20345
21378	-75	1745	8.8	K2	13 00.214	0.14	4	70.963	-75 12 00.55	0.23	4	70.963				20345
21378	SP				22 13 00.210	0.12	4	70.454	-75 12 00.64	0.16	4	70.454				17308
21379	+1	4596	8.0	F5	13 01.394	0.15	2	71.236	+1 41 48.50	0.52	2	71.236				33779
21380	-78	1442	5.63	A5	13 02.804	0.16	6	70.628	-77 45 42.04	0.26	6	70.628	3779	31133		53779
21380	SP				13 02.730	0.14	6	70.304	-77 45 42.00	0.43	6	70.304		3779	31133	20346
21381	-81	992	9.6	F5	13 05.771	0.22	4	70.644	-81 13 47.25	0.24	4	70.644				20346
21381	SP				22 13 05.744	0.10	4	71.009	-81 13 47.30	0.20	4	71.009				17309
21382	-32	16976	9.0	K0	13 17.508	0.10	4	70.851	-32 17 12.83	0.06	4	70.851				17310
21383	-3	5413	8.3	F0	13 22.106	0.19	2	71.687	-2 59 39.66	0.22	2	71.687				33780
21384	+7	4834	6.03	A0	13 30.404	0.18	7	70.757	+8 18 00.30	0.15	6	70.806	3780	31139		2654
21385	-44	14834	8.0	K2	13 31.238	0.21	4	70.422	-43 59 14.50	0.04	4	70.422				

21349 SDS, 8.5m-10.3m, 0°4, 83°.

CATALOG OF 23,001 STARS FOR 1950.0

531

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21386	+	2 4483	8.6	K0	22 13 33.302	0.08	2	71.284	+ 2 59 46.03	0.69	2	71.284				17311
21387	-	17 6478	8.5	A0	13 33.500	0.18	2	72.139	-17 27 17.46	0.35	2	72.139		31140		17312
21388	-	35 15229	8.98	F0	13 35.566	0.10	6	70.463	-35 26 11.09	0.14	6	70.463				21164
21389	-	40 14717	9.0	K0	13 36.496	0.06	4	70.788	-40 30 39.59	0.19	4	70.788				2655
21390	-	30 19081	8.6	K2	13 37.852	0.05	4	70.342	-29 49 51.99	0.27	4	70.342				17313
21391	-	56 9860	8.6	K5	22 13 38.799	0.13	4	69.902	-55 38 59.92	0.15	4	69.902				17314
21392	-	54 10048	8.8	G5	13 40.189	0.21	4	70.601	-54 04 11.11	0.20	4	70.601				17315
21393	-	31 18721	8.0	G5	13 55.486	0.14	3	71.002	-30 44 18.73	0.06	3	71.002				17316
21394	-	54 10051	7.28	F0	13 59.656	0.11	6	70.647	-54 34 16.38	0.15	6	70.647	3781	31148	4906	33781
21395	-	58 7938	8.3	G5	14 04.813	0.23	4	70.197	-58 02 02.55	0.41	4	70.197				17317
21396	-	17 6480	8.7	F8	22 14 08.053	0.13	2	72.058	-16 38 03.48	0.32	2	72.058				17318
21397	-	67 3879	8.6	G5	14 10.180	0.06	4	70.659	-67 26 32.80	0.08	4	70.659				20347
21398	-	34 15496	8.0	G5	14 10.181	0.15	4	71.394	-34 27 52.22	0.06	4	71.394				17320
21399	-	20 6401	8.2	A2	14 10.257	0.09	4	69.852	-20 16 30.32	0.08	4	69.852				17319
21400	-	7 5739	8.6	F8	14 10.769	0.19	2	72.943	- 7 23 55.02	--	1	72.466				17321
21401	-	50 13630	9.5	K2	22 14 11.812	0.12	3	71.031	-50 19 47.70	0.15	3	71.031				2656
21402	-	8 5845	4.32	K0	14 11.944	0.03	34	70.916	- 8 01 59.08	0.06	34	70.916	840	31152	4907	80840
21403	-	85 535	8.7	M2	14 13.386	0.02	3	70.083	-84 55 03.15	0.01	3	70.083				20348
21403	SP				14 13.555	0.12	4	69.696	-84 55 02.64	0.56	4	69.696				20348
21404	-	9 5948	6.08	K0	14 14.161	0.24	2	72.354	- 9 17 23.59	0.04	2	72.354		31155		17322
21405	+	1 4599	8.7	K0	22 14 19.302	--	1	69.538	+ 1 42 47.42	--	1	69.538				17323
21406	-	14 6245	8.5	K0	14 27.778	0.13	2	71.765	-14 26 33.19	0.03	2	71.765				17324
21407	-	6 5960	5.80	G5	14 29.892	0.08	6	71.162	- 5 38 14.82	0.17	6	71.162	3782	31163	4908	33782
21408	-	81 995	5.11	M3	14 32.930	0.02	179	71.081	-80 41 25.43	0.03	175	71.071	839	31166	4909	60839
21408	SP				14 32.941	0.02	239	71.105	-80 41 25.45	0.03	234	71.081	839	31166	4909	70839
21409	-	23 17351	7.57	K0	22 14 45.041	0.14	3	69.969	-23 21 53.41	0.11	3	69.969		31170		17326
21410	-	65 4017	8.6	F5	14 45.381	0.08	3	71.012	-64 48 29.98	0.14	3	71.012				20349
21411	-	56 9862	8.6	K0	14 49.727	0.11	4	71.460	-56 01 42.02	0.20	4	71.460				17328
21412	-	60 7561	2.91	K2	15 05.431	0.08	22	70.512	-60 30 36.07	0.09	21	70.514	841	31183	4912	30841
21413	-	36 15309	8.9	G5	15 17.700	0.10	4	71.074	-36 30 42.30	0.23	4	71.074				17331
21414	-	36 15310	9.2	G5	22 15 25.189	0.43	4	71.640	-35 44 53.27	0.21	4	71.640				17332
21415	+	26 4399	6.80	K5	15 28.296	0.14	6	71.712	+26 41 09.71	0.08	6	71.712	3783	31191	4913	33783
21416	-	27 15850	8.5	K5	15 35.420	0.17	4	70.767	-27 32 43.37	0.16	4	70.767				17334
21417	-	46 14270	7.36	K0	15 36.358	0.10	4	70.687	-46 23 16.81	0.20	4	70.687		31194		2657
21418	-	28 17686	8.3	K0	15 45.237	0.09	3	70.124	-28 22 06.10	0.07	3	70.124				17336
21419	-	39 14661	8.4	K0	22 15 54.396	0.10	4	71.135	-38 41 04.90	0.15	4	71.135				17337
21420	-	48 14181	8.5	M0	16 02.841	0.10	3	70.694	-48 17 09.47	0.12	3	70.694				2658
21421	-	23 17365	8.3	K0	16 12.618	0.07	4	70.156	-23 02 46.11	0.11	4	70.156				17340
21422	-	47 14141	8.0	A2	16 16.849	0.14	4	71.291	-46 56 13.15	0.15	4	71.291				2659
21423	-	14 6255	6.09	K0	16 19.914	--	1	71.554	-13 33 21.89	--	1	71.554		31199		17341
21424	-	66 3651	8.9	K0	22 16 21.980	0.09	4	70.687	-66 26 55.46	0.13	4	70.687				20350
21425	-	40 14731	8.0	K5	16 23.682	0.19	3	71.042	-40 32 06.68	0.24	3	71.042				2660
21426	-	32 17014	9.2	K0	16 27.684	0.06	4	70.128	-31 57 27.81	0.07	4	70.128				17342
21427	-	64 4236	8.7	K0	16 29.606	0.07	4	69.938	-63 52 46.92	0.10	4	69.938				17343
21428	-	24 17113	8.35	G0	16 40.714	0.13	4	70.341	-24 03 13.35	0.13	4	70.341		31207		17345
21429	-	42 15872	10.0	G0	22 16 47.528	0.18	3	70.779	-41 54 14.13	0.09	3	70.779				2661
21430	-	75 1746	7.42	M0	16 51.239	0.17	4	69.858	-75 13 09.76	0.17	4	69.858		31213		20351
21430	SP				16 51.307	0.05	4	69.612	-75 13 09.84	0.25	4	69.612		31213		20351
21431	-	17 6491	7.37	F8	16 51.859	0.06	2	72.088	-16 57 18.48	0.23	2	72.088		31214		17346
21432	-	53 10281	8.6	K0	16 52.584	0.15	4	70.372	-53 13 51.83	0.10	4	70.372				17347
21433	-	34 15519	8.6	K2	22 16 53.289	0.13	4	71.384	-33 48 32.08	0.16	4	71.384				17348
21434	-	12 6240	8.5	F8	16 53.711	--	1	69.538	-12 10 04.30	--	1	69.538				17349
21435	-	65 4022	8.7	A3	16 55.244	0.17	4	70.176	-65 29 03.20	0.15	4	70.176				20352
21436	-	10 5885	8.5	K0	16 57.955	--	1	72.806	-10 03 07.67	--	1	72.806				17350
21437	-	39 14673	7.8	K0	17 08.860	0.11	5	70.990	-39 00 59.39	0.28	5	70.990				17352
21438	-	4 5655	7.8	A3	22 17 13.162	--	1	71.707	- 4 19 04.06	--	1	71.707				17353
21439	-	51 13241	8.9	G0	17 13.392	0.20	4	70.927	-51 21 37.06	0.20	4	70.927				2662
21440	-	51 13243	9.5	G0	17 21.011	0.15	4	71.621	-51 02 55.86	0.22	4	71.621				2663
21441	-	44 14858	7.74	K0	17 22.023	0.18	4	71.792	-43 45 15.14	0.15	4	71.792		31221		2664
21442	-	59 7792	8.5	K5	17 25.576	0.17	4	70.592	-59 09 28.65	0.10	4	70.592				17354
21443	-	30 19102	9.0	K5	22 17 30.201	0.02	4	71.263	-29 58 18.48	0.06	4	71.263				17355
21444	+	2 4493	8.3	K0	17 33.744	--	1	71.718	+ 2 31 53.09	--	1	71.718				17356
21445	-	71 2680	9.4	K2	17 48.805	0.13	4	70.929	-70 55 40.55	0.24	4	70.929				20353
21446	-	35 15264	6.88	G5	17 51.225	0.14	6	70.578	-34 46 06.16	0.10	6	70.578	3785	31229		17357
21447	-	42 15880	9.0	G0	17 56.654	0.05	4	70.502	-41 40 56.19	0.08	4	70.502				2665
21448	-	56 9872	7.74	F8	22 18 06.983	0.18	4	70.605	-56 01 01.53	0.04	4	70.605		31231		17358
21449	-	0 4343	8.5	B9	18 07.129	0.19	2	71.195	+ 0 17 40.15	0.12	2	71.195				17359
21450	-	70 2922	8.8	K2	18 12.337	0.22	4	70.898	-69 54 20.88	0.26	4	70.898				20354
21451	-	9 5963	7.8	K0	18 13.097	0.10	2	71.704	- 9 01 02.62	0.02	2	71.704				17360
21452	-	32 17037	10.8	G0	18 16.609	--	1	69.806	-31 41 33.42	--	1	69.806				17361
21453	-	15 6197	8.6	G5	22 18 19.651	0.18	2	72.207	-15 10 14.83	0.03	2	72.207				17362
21454	-	60 7564	8.13	K2	18 20.339	0.14	4	70.332	-60 12 01.17	0.18	4	70.332		31237		17363
21455	+	0 4857	8.2	G5	18 32.901	--	1	71.557	+ 0 47 00.91	--	1	71.557				17364
21456	-	19 6265	8.1	K0	18 40.715	0.18	2	71.707	-18 45 29.70	0.02	2	71.707			4922	17365
21457	+	10 4735	8.4	K0	18 42.853	0.08	4	69.003	+10 38 33.13	0.18	4	69.003				28251

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21458	-59	7794	8.8	K0	22 18 47.340	0.10	4	70.548	-58 43 50.99	0.27	4	70.548				17366
21459	-29	18313	8.0	B9	18 48.584	0.20	4	69.969	-29 01 29.95	0.16	4	69.969				17367
21460	-22	5897	5.40	K0	18 50.580	0.04	42	70.731	-21 50 59.96	0.06	41	70.665	1584	31247	4925	31584
21461	-54	10067	7.03	K0	18 51.485	0.13	4	70.317	-54 06 59.40	0.27	4	70.317		31250		17368
21462	-72	2686	9.2	F0	18 53.793	0.12	4	69.903	-71 43 37.83	0.14	4	69.903				20355
21463	+2	4498	8.9	K0	22 18 58.031	0.04	2	72.298	+3 01 47.17	0.08	2	72.298				17369
21464	+11	4784	4.93	B3p	19 03.325	0.11	6	70.610	+11 57 09.72	0.15	6	70.610	843	31255	4926	30843
21465	-8	5858	7.9	M1	19 04.220	0.03	2	72.142	-7 51 39.11	0.02	2	72.142				17370
21466	-2	5741	3.97	A0	19 04.600	0.03	70	70.870	-1 38 23.73	0.04	69	70.876	842	31257	4927	80842
21467	-25	15887	7.66	K0	19 07.891	0.14	4	71.162	-25 37 04.42	0.12	4	71.162		31259		17371
21468	-6	5974	8.1	M0	22 19 09.491	--	1	72.564	-6 26 01.80	--	1	72.564		31260		17372
21469	-21	6207	8.3	K0	19 12.939	0.08	3	70.621	-21 04 51.84	0.28	3	70.621				17373
21470	-20	6411	7.8	G0	19 16.271	0.01	2	72.153	-19 41 15.39	0.10	2	72.153				17374
21471	-77	1540	8.48	G5	19 21.426	0.13	3	69.138	-77 06 22.71	0.29	3	69.138		31264		20356
21471	SP				19 21.399	0.06	4	69.145	-77 06 22.56	0.35	4	69.145		31264		20356
21472	-3	5433	8.8	K5	22 19 26.469	0.27	2	70.520	-2 31 49.62	0.09	2	70.520				17375
21473	-38	15012	9.0	G5	19 28.262	0.19	3	70.050	-37 41 14.52	0.22	3	70.050				17376
21474	-11	5817	7.9	K0	19 32.454	--	1	71.718	-11 06 02.37	--	1	71.718		31268		17377
21475	-73	2252	8.90	A0	19 34.681	0.13	4	69.983	-73 03 25.78	0.27	4	69.983		31269		20357
21476	-20	6414	8.7	G5	19 55.447	0.28	2	72.162	-19 36 10.31	0.26	2	72.162				17378
21477	-45	14677	8.0	A5	22 19 55.627	0.13	4	70.992	-45 22 41.41	0.09	4	70.992				2666
21478	-4	5663	8.0	K0	20 01.827	0.04	2	71.195	-3 59 23.72	0.24	2	71.195				17379
21479	-46	14295	5.82	F0	20 04.670	0.08	2	70.644	-46 10 52.39	0.17	2	70.644	3786	31279	4928	33786
21480	-44	14886	8.0	G5	20 06.159	0.12	5	69.688	-43 39 31.83	0.11	5	69.688				2667
21481	-65	4032	7.7	F0	20 21.224	0.14	4	70.254	-65 36 26.96	0.15	4	70.254				20358
21482	-89	53	6.54	A5	22 20 23.539	0.11	10	70.864	-89 04 36.62	0.10	9	70.909	1669	31285	4930	31669
21482	SP				20 24.310	0.07	20	70.255	-89 04 36.88	0.08	20	70.255	1669	31285	4930	51669
21483	-14	6269	8.4	A3	20 27.405	0.10	2	70.795	-14 27 52.74	0.02	2	70.795				17380
21484	-15	6208	7.06	F5	20 39.297	0.05	2	71.191	-15 12 11.36	0.71	2	71.191		31289		17381
21485	-66	3660	8.4	K2	20 39.629	0.17	4	70.008	-66 30 58.74	0.09	4	70.008				20359
21486	-51	13253	8.15	K2	22 20 40.608	0.15	4	69.815	-50 41 46.35	0.12	4	69.815		31290		2668
21487	-30	19128	9.1	K0	20 42.974	0.11	4	69.628	-29 56 51.20	0.08	4	69.628				17382
21488	-61	6649	8.8	K0	20 49.384	0.14	4	69.452	-60 56 20.43	0.21	4	69.452				17383
21489	-16	6075	9.0	F8	20 51.328	0.32	2	71.700	-16 13 09.55	0.14	2	71.700				17384
21490	-5	5777	8.8	K2	20 51.993	--	1	71.538	-4 44 17.15	--	1	71.538				17385
21491	+3	4699	8.5	G5	22 20 57.815	0.50	2	71.709	+3 36 05.08	0.10	2	71.709				17386
21492	+0	4868	9.0	A5	21 05.824	0.02	2	71.619	+0 43 42.86	0.17	2	71.619				17387
21493	-0	4354	8.2	A0	21 09.953	0.37	2	70.766	+0 18 14.33	0.09	2	70.766				17388
21494	-32	17056	8.43	K2	21 11.208	0.09	4	70.356	-31 43 56.02	0.15	3	69.885		31298		17389
21495	-71	2686	5.95	F0	21 18.438	0.20	6	69.130	-70 41 06.46	0.10	6	69.130	3788	31301	4932	33788
21496	-27	15887	7.98	F0	22 21 18.923	0.10	4	69.084	-26 37 36.81	0.07	4	69.084		31302		17390
21497	-49	13833	7.7	K2	21 22.127	0.05	5	70.473	-49 04 09.76	0.12	4	70.658				2669
21498	-10	5904	7.26	K0	21 28.870	0.22	2	71.687	-10 27 04.50	0.00	2	71.687		31306		17391
21499	-52	12020	8.5	G5	21 31.369	0.18	4	69.457	-52 00 17.20	0.05	4	69.457				17392
21500	-22	5904	7.5	K2	21 31.529	0.05	4	69.206	-21 51 03.64	0.16	4	69.206				17393
21501	-75	1748	6.17	G0	22 21 34.100	0.17	6	69.281	-75 16 12.02	0.20	6	69.281	3789	31308		33789
21501	SP				21 34.193	0.12	6	69.418	-75 16 12.27	0.17	6	69.418	3789	31308		53789
21502	+14	4790	6.73	A0	21 34.141	0.11	7	70.321	+15 01 40.46	0.20	6	70.297	3790	31309	4933	33790
21503	-2	5750	7.7	A3	21 35.576	0.07	2	71.683	-2 18 55.80	0.26	2	71.683				17394
21504	-38	15036	8.2	K0	21 45.001	0.07	4	70.868	-38 27 51.17	0.19	4	70.868				17395
21505	-14	6276	5.92	G5	22 21 46.520	0.07	4	72.056	-13 47 00.22	0.08	4	72.056	3791	31317	4936	17396
21506	+4	4850	8.9	K5	21 49.541	0.06	2	72.053	+4 48 24.15	0.30	2	72.053				17397
21507	-6	5985	8.6	G5	21 49.635	0.07	2	72.131	-6 17 11.30	0.07	2	72.131				17398
21508	-18	6114	7.4	K2	21 51.141	0.36	2	70.609	-17 50 48.84	0.08	2	70.609				17399
21509	-35	15303	8.9	K0	21 52.332	0.09	4	71.074	-35 03 21.65	0.14	4	71.074				17400
21510	-42	15904	7.90	K0	22 21 53.719	0.07	4	70.644	-41 38 27.81	0.12	4	70.644		31319		2670
21511	-1	4290	6.75	K0	22 01.249	0.18	2	71.278	-1 26 27.19	0.32	2	71.278		31323		17401
21512	-45	14689	8.5	K0	22 07.010	0.10	5	70.988	-44 40 03.84	0.18	5	70.988				2671
21513	-52	12022	7.58	G5	22 08.730	0.10	7	69.223	-51 39 07.63	0.11	5	69.597	3792	31324	4937	2672
21514	-47	14190	8.0	G5	22 09.500	0.10	4	70.778	-46 45 00.89	0.15	4	70.778				2673
21515	-48	14204	8.7	K0	22 22 13.015	0.11	4	70.771	-47 49 26.28	0.11	4	70.771				2674
21516	-39	14700	8.6	G5	22 27.188	0.10	4	70.786	-39 28 37.67	0.07	4	70.786				17402
21517	-86	406	5.74	K0	22 38.692	0.06	31	70.663	-86 13 25.33	0.08	31	70.663	1670	31327	4938	31670
21517	SP				22 38.736	0.05	41	70.946	-86 13 25.36	0.06	41	70.946	1670	31327	4938	51670
21518	-50	13671	8.0	M1	22 40.021	0.09	4	70.916	-50 04 49.34	0.28	4	70.916				2675
21519	+0	4872	4.64	B1p	22 22 43.404	0.04	38	71.823	+1 07 22.78	0.05	36	71.788	1585	31328	4939	31585
21520	-12	6264	8.5	F0	22 51.522	0.17	2	72.157	-12 09 44.69	0.60	2	72.157				17403
21521	-22	5910	8.6	K0	22 53.035	0.05	4	69.971	-21 51 10.99	0.10	4	69.971				17404
21522	-34	15580	8.4	K0	22 56.792	0.12	4	70.991	-33 37 35.10	0.13	4	70.991				17405
21523	+4	4853	8.6	G0	22 57.515	0.53	2	72.044	+4 29 35.86	0.24	2	72.044				17406
21524	-80	1050	8.9	K0	22 23 00.736	0.14	4	69.864	-79 54 52.52	0.43	4	69.864				20360
21524	SP				23 00.902	0.16	4	70.112	-79 54 51.67	0.16	4	70.112				20360
21525	-45	14695	7.5	K0	23 05.832	0.12	4	71.369	-45 15 10.04	0.18	4	71.369				2676
21526	-40	14782	8.5	G5	23 07.569	0.09	5	70.671	-40 22 27.85	0.11	4	70.907				2677
21527	-63	4789	7.99	K2	23 09.306	0.13	4	70.202	-62 47 39.76	0.09	4	70.202		31336		17407

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21528	-59	7798	8.3	K5	22 23 14.978	0.08	4	70.661	-59 07 57.67	0.12	4	70.661	1586	31338	4941	17408
21529	+17	4746	6.40	K0	23 15.836	0.15	5	69.674	+18 11 22.54	0.14	5	69.674				31586
21530	-23	17435	8.5	P5	23 18.372	0.14	4	69.616	-23 10 49.08	0.14	4	69.616				17409
21531	-15	6221	8.6	G5	23 18.781	0.13	2	71.706	-15 12 22.67	0.17	2	71.706				17410
21532	-27	15911	8.4	K0	23 21.599	0.08	4	70.441	-27 35 42.54	0.07	4	70.441				17411
21533	-28	17758	7.59	K0	22 23 22.412	0.15	4	69.769	-28 16 01.83	0.09	4	69.769		31341		17412
21534	-26	16135	8.8	F0	23 23.054	0.25	3	69.717	-25 49 24.94	0.16	3	69.717				17413
21535	-24	17171	6.17	A0	23 25.020	0.16	7	70.877	-23 56 13.78	0.09	6	70.947	3793	31343	4942	33793
21536	-25	15922	8.6	A3	23 25.040	0.09	4	70.089	-24 41 43.68	0.17	4	70.089				17414
21537	-13	6187	8.7	P5	23 28.555	0.09	2	71.673	-13 03 18.47	0.36	2	71.673				17415
21538	-19	6275	8.7	F2	22 23 34.635	0.10	2	71.696	-18 49 05.32	0.22	2	71.696				17416
21539	-57	10088	9.1	K5	23 36.288	0.21	4	70.170	-56 53 26.63	0.19	4	70.170				17417
21540	-64	4256	9.1	K0	23 52.203	0.10	4	71.687	-63 56 35.25	0.16	4	71.687				17418
21541	-53	10297	8.8	K0	23 52.368	0.18	4	70.424	-53 13 04.84	0.13	4	70.424				17419
21542	-1	4294	8.2	K2	23 55.788	0.64	2	72.068	-0 49 20.01	0.10	2	72.068				17420
21543	-8	5873	6.89	F0	22 23 57.254	0.13	2	72.017	-7 37 56.67	0.52	2	72.017		31351		17421
21544	-36	15393	8.2	K0	24 05.220	0.10	4	70.575	-35 55 49.82	0.11	4	70.575				17422
21545	-9	5978	8.7	A2	24 09.177	0.08	2	71.205	-8 45 57.36	0.29	2	71.205				17423
21546	-58	7958	7.9	K0	24 25.169	0.07	3	70.302	-58 16 05.09	0.09	3	70.302				17424
21547	-34	15589	8.9	K0	24 26.537	0.17	4	70.398	-34 33 33.24	0.29	4	70.398				17425
21548	-20	6430	8.8	A2	22 24 28.786	0.52	2	71.174	-19 41 54.14	0.18	2	71.174				17426
21549	-33	16080	9.2	K0	24 45.949	0.14	4	71.330	-33 26 32.53	0.09	3	70.634				17427
21550	-64	4263	8.1	K5	24 46.351	0.19	4	70.793	-64 32 42.88	0.08	4	70.793				20361
21551	-73	2259	8.54	K0	24 47.581	0.05	3	70.092	-72 43 37.47	0.08	3	70.092		31367		20362
21552	-2	5765	9.0	A5	24 51.650	0.28	2	71.684	-1 53 46.06	0.01	2	71.684				17428
21553	-27	15916	7.18	F0	22 24 52.208	0.05	4	69.143	-26 40 27.07	0.09	4	69.143		31369		17429
21554	-87	323	7.6	K0	24 57.145	0.10	4	69.868	-87 34 41.66	0.09	4	69.868				20363
21554	SP				24 57.048	0.15	4	70.111	-87 34 42.16	0.18	4	70.111				20363
21555	-37	14802	8.7	K0	24 58.225	0.17	4	70.957	-37 19 58.87	0.14	4	70.957				17430
21556	-68	3493	5.70	A3	24 58.904	0.04	57	70.885	-67 44 39.33	0.04	56	70.923	1587	31371	4947	31587
21557	-57	10093	9.0	G5	22 25 04.091	0.11	3	70.041	-56 46 03.59	0.46	3	70.041				17431
21558	-58	7959	9.2	K5	25 14.026	0.12	3	71.093	-57 57 12.86	0.12	3	71.093				17432
21559	-6	5996	8.2	G5	25 15.104	0.12	2	72.220	-6 09 41.12	0.13	2	72.220				17433
21560	+0	4876	8.5	F0	25 16.465	0.04	2	72.062	+1 24 05.75	0.33	2	72.062				17434
21561	-39	14719	7.42	K5	25 17.822	0.14	4	70.718	-39 20 41.46	0.06	4	70.718		31376		17435
21562	-31	18819	8.6	K0	22 25 19.385	0.02	4	69.229	-31 19 56.60	0.05	4	69.229				17436
21563	-32	17097	9.2	K0	25 19.532	0.19	2	70.075	-32 31 17.55	0.04	2	70.075				17437
21564	+3	4710	4.93	K0	25 19.715	0.12	6	70.332	+4 26 33.24	0.35	6	70.332	3796	31377		33796
21565	-68	3495	9.4	K2	25 30.075	0.13	3	70.582	-68 19 08.30	0.21	3	70.582				20364
21566	-70	2932	7.7	K0	25 34.108	0.08	4	71.417	-69 41 38.09	0.15	4	71.417				20365
21567	+2	4508	9.0	K0	22 25 34.604	0.03	2	72.571	+2 29 59.74	--	1	71.721				17438
21568	-39	14723	5.48	K0	25 43.821	0.04	36	71.603	-39 23 11.22	0.05	35	71.635	845	31387	4949	30845
21569	-46	14327	8.0	K0	25 59.098	0.09	3	71.032	-45 49 23.12	0.30	3	71.032				2678
21570	-22	5920	7.30	F2	26 04.423	0.13	4	69.655	-22 19 35.20	0.15	4	69.655		31395		17439
21571	-3	5450	8.5	F8	26 12.785	--	1	71.863	-2 40 33.76	--	1	71.863				17442
21572	-37	14810	7.54	K0	22 26 13.604	0.06	4	71.215	-37 13 34.02	0.16	3	71.710		31397		17443
21573	-44	14931	4.02	G5	26 17.374	0.03	5	71.692	-43 45 06.20	0.09	5	71.692	846	31400	4950	30846
21574	-49	13867	8.7	G0	26 20.290	0.05	3	70.591	-48 45 45.29	0.14	3	70.591				2679
21575	-21	6234	8.2	A3	26 22.779	0.09	4	70.115	-20 39 54.38	0.17	4	70.115				17444
21576	+13	4926	8.7	G0	26 32.925	0.22	3	69.987	+14 04 37.65	0.18	3	69.987				28266
21577	-29	18355	7.30	K0	22 26 37.696	0.13	5	71.094	-28 54 56.43	0.13	4	71.404		31407		17446
21578	+8	4874	5.82	K2	26 38.256	0.04	57	71.004	+8 52 22.67	0.05	57	71.004	1588	31408	4951	81588
21579	-34	15611	7.5	K0	26 41.015	0.08	4	70.658	-34 06 27.18	0.22	4	70.658				17448
21580	-29	18358	8.6	K2	26 42.549	0.13	4	70.781	-29 20 08.25	0.18	4	70.781				17449
21581	+26	4439	5.96	K2	26 49.487	--	1	68.416	+26 30 25.90	--	1	68.416	1589	31415	4952	31589
21582	-42	15940	9.5	G0	22 26 49.990	0.09	4	70.989	-41 52 02.07	0.18	4	70.989				2680
21583	-46	14330	7.5	G5	26 50.896	0.05	4	71.117	-46 19 52.71	0.23	3	70.350				2681
21584	-62	6341	7.7	K0	26 54.394	0.09	4	70.232	-62 32 20.43	0.28	4	70.232				17453
21585	-27	15932	5.95	F0	26 58.594	0.11	6	70.281	-27 21 49.06	0.10	6	70.281	3798	31417	4953	33798
21586	-1	4303	8.5	F8	27 19.293	--	1	71.696	-0 55 21.42	--	1	71.696				17455
21587	-52	12031	8.81	K0	22 27 19.992	0.11	4	69.190	-51 48 32.90	0.15	4	69.190		31422		17456
21588	-13	6204	6.21	F0	27 21.389	0.12	2	71.220	-13 10 17.86	0.01	2	71.220		31423		17457
21589	-48	14226	8.8	K0	27 28.247	0.16	4	71.119	-48 13 02.80	0.16	4	71.119				2682
21590	-25	15955	8.7	G0	27 28.673	0.13	4	70.934	-24 57 39.12	0.07	4	70.934				17458
21591	-36	15424	9.0	G5	27 28.733	0.46	3	70.633	-35 45 07.11	0.19	3	70.633				17459
21592	-0	4371	7.8	A0	22 27 36.151	0.10	2	71.747	-0 07 05.72	0.36	2	71.747				17460
21593	-15	6231	6.37	A0	27 36.719	0.17	2	72.210	-14 50 31.75	0.10	2	72.210		31428		17461
21594	-17	6537	7.19	G5	27 45.194	0.15	2	72.172	-16 36 13.67	0.37	2	72.172		31431		17462
21595	-47	14222	8.5	K5	27 45.385	0.13	4	70.727	-46 59 49.34	0.14	4	70.727				2683
21596	-30	19188	8.8	K0	27 48.081	0.18	4	70.982	-30 23 16.13	0.17	4	70.982				17463
21597	-18	6135	8.7	K2	22 27 56.654	--	1	71.688	-18 01 01.03	--	1	71.688				17464
21598	-11	5850	4.89	A0	28 00.122	0.03	68	70.983	-10 56 04.60	0.03	66	70.980	1591	31440	4958	81591
21599	-24	17200	8.01	K0	28 03.902	0.16	4	71.165	-24 25 30.61	0.07	4	71.165		31443		17465
21600	-26	16175	6.53	K0	28 07.260	0.11	4	71.130	-26 19 48.60	0.15	4	71.130		31444		17466
21601	+3	4716	8.0	K0	28 08.587	0.37	2	71.771	+4 04 30.99	0.49	2	71.771		31445		17467

21577 A 15978AB, 7.9m-8.2m, 0th1.21587 SDS, 11.8m, 2nd4, 256th.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21602	-39 14736	9.2	K5	22 28 09.254	0.17	3	70.738	-38 40 10.47	0.18	3	70.738				17468
21603	-54 10089	8.29	K2	28 24.857	0.14	4	69.194	-53 38 22.86	0.14	4	69.194		31452		17469
21604	-42 15957	8.5	K0	28 27.343	0.10	4	71.220	-41 41 24.79	0.04	4	71.220				2684
21605	-69 3243	7.22	F2	28 27.424	0.10	6	70.830	-69 21 54.31	0.06	6	70.830	3801	31453		33801
21606	-23 17470	8.0	G0	28 28.705	0.13	4	70.655	-23 15 12.93	0.08	4	70.655				17470
21607	-32 17126	4.40	A0	22 28 40.149	0.03	62	70.853	-32 36 11.46	0.04	62	70.853	1592	31459	4960	31592
21608	-3 5460	6.29	K0	28 43.296	0.08	6	69.194	-3 10 05.20	0.12	6	69.194	3802	31462	4961	33802
21609	-40 14815	8.0	K0	28 45.314	0.11	3	70.664	-40 14 09.64	0.09	3	70.664				2685
21610	-67 3904	9.1	K2	28 48.724	0.15	4	69.644	-67 19 27.93	0.31	4	69.644				20366
21611	-14 6299	8.9	K0	28 55.810	0.23	2	71.789	-14 04 10.01	0.37	2	71.789				17471
21612	-44 14949	7.5	M0	22 29 00.284	0.13	4	70.830	-43 48 19.19	0.26	4	70.830				2686
21613	-11 5855	6.39	F0	29 02.434	0.17	2	71.296	-11 09 45.36	0.01	2	71.296		31468	4962	17472
21614*	-43 15073	8.0	K0	29 05.708	0.03	5	71.846	-42 59 51.82	0.06	4	71.453				2687
21615	-77 1549	8.3	K0	29 16.217	0.12	4	69.884	-77 24 07.64	0.11	4	69.884				20367
21615 SP				29 16.245	0.10	4	70.031	-77 24 07.39	0.27	4	70.031				20367
21616	-36 15435	8.4	K5	22 29 23.706	0.07	5	71.923	-36 10 41.83	0.12	5	71.923				17473
21617	-75 1752	9.2	K5	29 27.916	0.15	4	69.924	-74 55 23.17	0.10	4	69.924				20368
21618	-14 6301	8.3	F8	29 29.476	0.42	2	72.270	-13 51 17.43	0.34	2	72.270		31475		17474
21619	-56 9906	8.6	G5	29 31.325	0.21	4	70.733	-56 14 41.36	0.19	4	70.733				17475
21620	-35 15368	7.94	K0	29 32.719	0.07	5	70.481	-35 18 18.90	0.14	5	70.481		31477		17476
21621	-62 6348	4.92	M3	22 29 38.456	0.04	6	70.689	-62 14 23.26	0.20	6	70.689	3803	31478	4965	33803
21622	-11 5858	8.7	K5	29 47.937	0.16	2	71.660	-11 11 54.27	0.25	2	71.660		31479		17477
21623	+ 1 4623	7.1	K2	29 49.182	0.05	2	72.190	+ 2 19 43.43	0.28	2	72.190				17478
21624	-7 5805	6.97	G0	29 56.825	0.18	2	71.214	-6 43 30.90	0.17	2	71.214		31481		17479
21625	-60 7574	7.9	G5	30 06.425	0.16	4	70.147	-60 15 00.12	0.25	4	70.147				17480
21626	+ 0 4892	8.3	K0	22 30 07.970	0.15	2	71.766	+ 0 50 45.95	0.03	2	71.766				17481
21627	+19 4949	6.31	F0	30 10.595	0.08	6	71.357	+19 58 18.83	0.15	6	71.357	3804	31486		33804
21628	-29 18384	8.0	K2	30 12.510	0.14	4	69.908	-29 14 24.53	0.15	4	69.908				17482
21629	-76 1560	9.4	M1	30 13.540	0.13	4	70.490	-76 17 49.24	0.12	4	70.490				20369
21629 SP				30 13.494	0.15	4	70.209	-76 17 48.93	0.29	3	69.848				20369
21630	+ 2 4516	7.5	K2	22 30 13.790	0.24	2	71.277	+ 2 44 52.07	0.10	2	71.277				17483
21631	+15 4670	6.36	K0	30 20.193	0.16	6	71.097	+15 36 18.53	0.19	6	71.097	3806	31490		33806
21632	-51 13321	8.84	K0	30 20.858	0.17	5	71.239	-51 14 43.13	0.13	5	71.239		31493		2688
21633	-35 15380	7.21	K2	30 25.621	0.14	4	70.702	-35 23 47.68	0.07	4	70.702				31495
21634	-79 1205	7.91	G0	30 37.662	0.12	3	71.084	-78 52 20.64	0.17	3	71.084		31496		20370
21634 SP				22 30 37.655	0.15	4	70.164	-78 52 20.98	0.25	4	70.164		31496		20370
21635	-1 4311	8.4	F5	30 38.901	0.14	2	71.804	-1 10 09.98	0.41	2	71.804				17485
21636	-9 6001	8.8	G0	30 43.136	0.13	2	72.152	-9 19 16.64	0.10	2	72.152				17486
21637	-79 1206	6.08	K0	30 46.056	0.13	7	70.215	-79 01 48.56	0.15	7	70.215	3807	31498		33807
21637 SP				30 46.052	0.10	6	69.963	-79 01 48.78	0.22	6	69.963	3807	31498		53807
21638	-0 4380	9.0	A5	22 30 49.323	--	1	71.571	+ 0 00 41.87	--	1	71.571				17487
21639	-26 16203	8.6	F2	30 59.073	0.00	2	69.008	-25 55 27.63	0.26	2	69.008				17488
21640	-43 15089	9.0	F2	31 02.713	0.11	4	70.801	-43 36 42.91	0.29	4	70.801				2689
21641	-42 15971	9.0	K0	31 06.898	0.14	3	70.618	-41 59 16.71	0.12	3	70.618				2690
21642	-33 16118	8.9	K0	31 08.601	0.05	4	71.131	-32 55 16.75	0.17	4	71.131				17489
21643	-13 6215	8.4	G0	22 31 09.318	--	1	71.759	-12 38 47.34	--	1	71.759				17490
21644	-54 10096	7.58	A0	31 10.069	0.07	3	70.745	-54 33 22.57	0.12	3	70.745		31501		17491
21645	-55 9857	8.1	K5	31 14.994	0.19	4	70.451	-55 34 53.67	0.04	4	70.451				17493
21646	-28 17827	8.7	K5	31 21.421	0.12	3	70.516	-27 54 40.14	0.22	3	70.516				17494
21647	-61 6658	9.0	G5	31 23.037	0.15	3	70.684	-61 23 00.51	0.14	3	70.684				17495
21648	-23 17495	8.3	K0	22 31 24.802	0.10	4	69.970	-23 33 05.58	0.07	4	69.970				17496
21649*	-19 6299	8.5	F8	31 28.283	--	1	72.466	-18 56 41.86	--	1	72.466				17499
21650	-45 14739	9.0	G5	31 40.925	0.11	4	71.140	-44 53 32.38	0.14	4	71.140				2691
21651	-21 6251	5.29	F5	31 58.002	0.04	47	70.878	-20 57 56.74	0.05	47	70.878	849	31516	4969	80849
21652	-0 4383	7.02	K5	32 02.431	--	1	69.538	+ 0 20 13.70	--	1	69.538		31518		17504
21653	-62 6352	7.9	G5	22 32 05.877	0.19	4	70.674	-61 54 02.40	0.16	4	70.674				17506
21654	-32 17152	9.2	K0	32 06.492	0.45	3	70.649	-32 13 59.36	0.07	3	70.649				17507
21655	-33 16126	9.1	F8	32 10.404	0.07	3	70.778	-33 10 40.60	0.08	3	70.778				17508
21656	-50 13720	7.8	K2	32 10.942	0.05	4	69.983	-50 15 00.51	0.13	4	69.983				2692
21657	-71 2706	6.96	K0	32 21.533	0.09	4	70.178	-71 13 22.99	0.18	4	70.178		31523		20371
21658	-22 5944	9.0	A0	22 32 23.212	0.21	3	69.766	-22 20 20.16	0.25	3	69.766				17509
21659	-52 12042	6.80	K0	32 28.334	0.10	6	69.585	-51 51 46.92	0.07	6	69.585	3809	31527	4970	33809
21660	-39 14768	8.6	K0	32 34.934	0.08	4	70.592	-38 41 31.16	0.21	4	70.592				17512
21661	-40 14836	8.5	K0	32 44.989	0.08	4	71.168	-39 47 21.32	0.12	4	71.168				17515
21662	-3 5472	8.3	K0	32 45.556	--	1	71.863	-2 30 57.52	--	1	71.863				17516
21663	-0 4384	4.13	B8	22 32 47.318	0.12	5	71.297	-0 22 34.02	0.22	5	71.297	850	31534	4971	30850
21664	-38 15125	9.3	K5	32 52.811	0.26	3	70.782	-37 41 58.14	0.32	3	70.782				17517
21665	-18 6153	8.2	K0	32 59.106	0.46	2	72.082	-17 52 46.21	0.02	2	72.082		31537		17518
21666	-30 19221	7.7	M0	32 59.570	0.05	4	70.702	-30 35 42.48	0.09	4	70.702				17519
21667	-72 2701	8.7	K0	33 05.068	0.14	4	69.785	-71 52 32.65	0.18	4	69.785				20372
21668	-40 14839	9.0	K0	22 33 05.892	0.17	4	71.188	-40 34 21.82	0.09	4	71.188				2693
21669	-18 6154	6.81	K5	33 07.378	0.13	6	71.596	-17 43 09.35	0.08	6	71.596	3810	31540	4972	33810
21670	-41 14954	9.0	G5	33 10.217	0.09	4	71.035	-41 26 02.06	0.42	4	71.035				2694
21671	+ 3 4734	9.0	K2	33 10.267	--	1	71.759	+ 4 00 43.70	--	1	71.759				17520
21672	-21 6254	7.48	K2	33 10.786	0.03	4	70.441	-21 11 37.75	0.13	4	70.441		31541		17521

21614 SDS, 8.3m-8.6m, 0°1, 320°.

21649 A 16056, SDS, 9.0m-9.0m, 0°2, 204°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21673	-35	15405	9.0	G0	22 33 12.016	0.16	4	71.390	-35 34 44.20	0.27	4	71.390				17522
21674	-83	738	8.02	F0	33 13.476	0.22	3	70.606	-83 04 26.11	0.23	3	70.606		31543		20373
21674	SP				33 13.496	0.05	4	70.054	-83 04 25.86	0.21	4	70.054		31543		20373
21675	-65	4070	7.6	K2	33 21.312	0.07	4	70.206	-64 38 58.12	0.16	4	70.206				20374
21676	-7	5818	8.5	K0	33 25.375	0.20	2	72.641	-7 20 07.24	0.05	2	72.641				17523
21677	-17	6554	6.69	B2	22 33 25.451	0.18	2	72.438	-16 38 50.11	0.08	2	72.438		31545		17524
21678	-35	15406	9.0	G5	33 27.155	0.03	4	70.638	-34 48 40.03	0.18	4	70.638				17525
21679	-27	15981	8.5	A2	33 30.904	0.10	3	70.295	-27 24 45.88	0.16	3	70.295				17526
21680	-53	10316	8.7	K0	33 32.276	0.09	4	69.934	-53 23 11.38	0.27	4	69.934				17527
21681	-41	14959	6.11	A2	33 34.560	0.19	5	70.519	-40 50 29.86	0.07	5	70.519	3811	31547	4973	33811
21682	-81	1009	8.6	K0	22 33 38.979	0.11	4	69.644	-80 41 17.63	0.20	4	69.644				20375
21682	SP				33 38.867	0.21	4	69.688	-80 41 17.73	0.18	4	69.688				20375
21683	-32	17162	7.31	K0	33 50.551	0.17	3	69.479	-31 54 04.55	0.16	3	69.479		31557		17528
21684	-58	7974	9.0	G5	33 56.131	0.10	4	70.145	-58 01 41.09	0.06	4	70.145				17529
21685	-36	15471	8.8	K0	33 58.038	0.12	4	70.233	-35 45 01.03	0.22	4	70.233				17530
21686	-66	3686	7.4	K0	22 34 04.721	0.07	5	71.124	-65 49 33.04	0.19	5	71.124				20376
21687	-45	14750	8.1	K0	34 21.690	0.14	4	70.118	-44 55 29.87	0.09	4	70.118				2695
21688	-12	6315	8.3	K0	34 27.356	0.12	2	71.205	-11 59 26.57	0.01	2	71.205				17531
21689	-6	6034	7.6	K2	34 41.581	0.07	2	70.579	-6 19 37.43	0.07	2	70.579				17532
21690	-37	14859	9.1	K5	34 42.935	0.15	4	70.173	-36 46 07.28	0.21	4	70.173				17533
21691	+1	4634	8.2	K5	22 34 43.613	0.30	2	71.255	+1 39 55.19	0.27	2	71.255				17534
21692	-43	15113	9.2	K5	34 50.053	0.18	4	70.155	-42 39 52.58	0.06	4	70.155				2696
21693	-17	6564	8.9	K0	34 50.880	0.04	2	72.131	-16 37 50.48	0.04	2	72.131				17535
21694	-22	5956	8.1	G0	34 52.514	0.15	4	69.209	-22 03 26.40	0.02	4	69.209				17536
21695	-56	9919	7.94	K2	34 54.085	0.17	4	69.403	-55 43 54.24	0.14	4	69.403		31575		17537
21696	-25	16021	8.8	K0	22 34 56.178	0.09	4	69.194	-25 25 35.55	0.14	4	69.194				17538
21697	-53	10322	8.05	K5	34 57.102	0.20	4	69.795	-53 01 51.10	0.10	4	69.795		31576		17539
21698	-54	10110	9.0	K0	35 09.137	0.09	4	71.224	-54 12 42.64	0.12	4	71.224				17540
21699	-4	5716	5.33	K0	35 09.922	0.03	53	71.755	-4 29 14.22	0.05	53	71.755	1595	31581	4980	31595
21700	+23	4576	6.93	A3	35 10.187	0.09	6	69.951	+23 44 29.06	0.12	6	69.951	3813	31582	4981	33813
21701	-14	6317	8.3	K0	22 35 13.772	0.12	2	71.732	-13 37 51.15	0.14	2	71.732				17541
21702	-60	7583	8.0	K0	35 14.357	0.39	3	69.673	-60 14 41.32	0.28	3	69.673				17542
21703	-44	14987	8.2	K0	35 14.541	0.09	4	70.551	-44 00 03.01	0.14	4	70.551				2697
21704	-86	410	7.9	K2	35 19.669	0.25	4	70.085	-85 46 16.56	0.24	4	70.085				20377
21704	SP				35 19.573	0.12	4	70.036	-85 46 16.60	0.29	4	70.036				20377
21705	-26	16242	8.06	F0	22 35 26.945	0.11	4	70.371	-25 54 58.90	0.18	4	70.371		31590		17543
21706	-49	13920	7.8	K2	35 30.548	0.16	4	70.109	-48 56 27.63	0.15	4	70.109				2698
21707	-37	14867	9.0	M0	35 36.238	0.19	4	70.620	-37 09 19.88	0.27	4	70.620				17544
21708	-27	15992	8.0	K0	35 36.276	0.11	4	69.706	-27 07 48.73	0.06	4	69.706				17545
21709	-23	17528	8.0	K5	35 40.448	0.13	3	70.254	-22 59 56.33	0.08	3	70.254				17546
21710	-84	643	9.3	K2	22 35 42.672	0.12	3	69.988	-83 43 28.82	0.23	3	69.988				20378
21710	SP				35 42.522	0.10	4	70.136	-83 43 28.96	0.08	4	70.136				20378
21711*	-21	6266	9.1	F0	35 49.530	0.13	4	70.229	-21 05 38.95	0.15	4	70.229				17547
21712	-50	13750	9.0	K0	35 54.000	0.06	4	69.646	-50 16 32.26	0.13	4	69.646				2699
21713*	-59	7821	8.6	K0	35 56.040	0.15	6	71.779	-59 04 07.15	0.29	6	71.779				17548
21714	-74	2040	9.4	G5	22 35 56.567	0.09	4	69.451	-74 12 38.92	0.14	4	69.451				20379
21715	+2	4536	8.7	K5	35 57.265	0.05	2	71.604	+3 04 54.73	0.46	2	71.604				17549
21716	-33	16160	5.60	A0	36 02.267	0.05	6	69.439	-33 20 31.52	0.12	6	69.439	3814	31598	4984	33814
21717	+3	4745	6.90	A3	36 18.009	0.10	4	72.212	+4 16 10.75	0.11	4	72.212	3815	31605		17550
21718	-3	5482	8.4	G5	36 21.432	0.10	2	72.302	-3 17 10.73	0.27	2	72.302				17551
21719	-51	13342	7.72	M0	22 36 25.756	0.10	4	69.213	-50 56 31.97	0.09	4	69.213		31609		2700
21720	-18	6163	8.7	A0	36 25.788	0.20	2	72.304	-18 03 32.37	0.48	2	72.304				17552
21721	+18	5015	9.0	K0	36 32.043	0.13	5	69.792	+18 34 19.13	0.09	4	69.624				28296
21722	-75	1756	9.0	K5	36 37.720	0.06	4	70.234	-75 21 05.20	0.12	4	70.234				20380
21722	SP				36 37.852	0.28	4	70.110	-75 21 04.58	0.41	4	70.110				20380
21723	-4	5721	8.7	K0	22 36 40.235	0.13	2	71.293	-3 52 04.96	0.09	2	71.293		31616		17553
21724	-1	4336	8.4	F5	36 42.328	0.01	2	72.049	-0 58 35.84	0.13	2	72.049				17554
21725	-47	14289	8.0	F8	36 49.402	0.06	4	70.124	-46 56 47.10	0.12	4	70.124				2701
21726	-66	3690	8.5	F5	36 52.713	0.09	4	70.352	-66 02 21.40	0.21	4	70.352				20381
21727	-8	5918	8.0	K0	36 53.404	0.18	2	71.699	-7 51 54.99	0.02	2	71.699				17555
21728	-48	14271	7.5	K0	22 36 57.239	0.13	4	70.142	-48 00 19.62	0.14	4	70.142				2702
21729	-50	13760	7.30	K0	37 05.712	0.11	4	70.654	-49 51 31.93	0.05	4	70.654		31627		2703
21730	-35	15441	6.8	K0	37 07.811	0.15	4	70.144	-35 26 08.02	0.13	4	70.144				17556
21731	+0	4904	8.6	A2	37 12.299	0.27	2	71.274	+0 46 40.36	0.14	2	71.274				17557
21732	-81	1012	8.9	K0	37 15.805	0.05	3	70.376	-81 12 01.07	0.27	3	70.376				20382
21732	SP				22 37 15.697	0.07	4	70.185	-81 12 00.78	0.13	4	70.185				20382
21733	+2	4542	8.4	K5	37 17.113	0.20	3	71.333	+2 58 53.49	0.10	2	71.191				17558
21734*	-19	6316	7.27	F8	37 20.755	0.08	2	71.190	-19 27 31.28	0.27	2	71.190		31633		17559
21735	-29	18421	8.5	K0	37 22.999	0.11	5	69.828	-29 34 25.33	0.13	5	69.828				17560
21736	-20	6465	8.7	K2	37 24.643	0.09	4	69.743	-20 16 13.95	0.16	4	69.743				17561
21737	-44	15002	8.5	K0	22 37 27.273	0.06	4	70.854	-43 42 02.51	0.19	4	70.854				2704
21738	-33	16172	7.8	G5	37 33.708	0.14	4	70.156	-32 53 59.42	0.07	4	70.156				17562
21739	-7	5827	7.13	G0	37 35.977	0.01	2	71.699	-6 47 43.13	0.20	2	71.699		31640		17563
21740	-58	7984	5.91	K0	37 38.634	0.04	6	69.238	-57 41 01.12	0.08	6	69.238	3816	31641	4989	33816
21741	-57	10118	8.9	G5	37 40.241	0.16	4	70.128	-57 21 51.63	0.19	4	70.128				17564

21711 9.2m-10.6m, 0°5, 330°.
 21713 SDS, 11.2m, 4°2, 274°.

21734 A 16155, 10.6m, 10°9, 204°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
21742	-15	6258	8.4	K0	22 37 41.064	0.22	2	71.707	-14 51 54.35	0.42	2	71.707				17565
21743	-12	6323	8.6	K5	37 42.116	0.14	2	71.793	-11 51 59.25	0.20	2	71.793				17566
21744	-36	15505	9.0	G0	37 52.711	0.09	4	70.565	-35 43 46.78	0.15	4	70.565				17567
21745	-27	16010	4.22	B8	37 53.675	0.03	80	71.252	-27 18 17.77	0.04	80	71.252	854	31646	4990	30854
21746	-17	6571	8.0	K0	37 58.217	0.30	2	71.267	-17 01 56.18	0.13	2	71.267				17568
21747	+ 3	4752	8.7	K2	22 37 58.862	0.04	2	71.792	+ 4 26 09.17	0.32	2	71.792				17569
21748	-45	14767	9.3	P5	37 59.799	0.04	4	71.266	-45 29 15.23	0.30	4	71.266				2705
21749	-52	12056	7.7	M1	38 00.287	0.17	4	70.661	-51 43 12.72	0.12	4	70.661				17570
21750	-46	14401	8.5	K5	38 00.536	0.05	4	70.614	-46 27 48.12	0.11	4	70.614				2706
21751	-72	2711	8.5	K2	38 14.351	0.13	4	70.404	-71 47 24.89	0.38	4	70.404				20383
21752	-69	3255	9.0	K2	22 38 16.287	0.15	4	70.904	-69 33 37.19	0.06	4	70.904				20384
21753	-24	17276	7.01	F8	38 20.409	0.15	4	69.433	-23 46 56.06	0.15	4	69.433	31653			17571
21754	-63	4813	9.0	F8	38 23.765	0.14	4	70.285	-63 31 54.75	0.20	4	70.285				17572
21755*	+13	4971	5.81	G5	38 24.258	0.14	4	69.094	+14 17 11.85	0.13	4	69.094	31655	4991		28308
21756	-41	14983	9.2	K0	38 31.802	0.14	4	70.878	-41 31 07.26	0.20	4	70.878				2707
21757	-69	3258	8.08	K2	22 38 35.208	0.15	4	70.817	-68 39 39.47	0.18	4	70.817	31657			20385
21758	-26	16276	7.22	F5	38 37.699	0.09	4	70.974	-25 36 43.20	0.17	4	70.974	31658			17573
21759	+13	4973	8.7	G0	38 45.209	0.11	5	70.256	+14 17 04.56	0.12	4	70.205				28310
21760	-68	3519	9.0	A0	38 47.100	0.26	5	71.123	-68 05 43.21	0.20	5	71.123				20386
21761	- 6	6051	8.9	K0	38 48.391	0.09	2	72.142	- 5 55 01.21	0.42	2	72.142				17574
21762	-78	1454	9.0	K2	22 38 57.792	0.17	4	69.902	-78 25 37.75	0.14	4	69.902				20387
21762	SP				38 57.794	0.04	4	70.115	-78 25 37.14	0.36	4	70.115				20387
21763	+10	4797	3.61	B8	38 58.109	0.12	4	70.368	+10 34 11.18	0.16	4	70.368	855	31664	4992	30855
21764	-38	15177	9.2	G0	38 58.349	0.02	3	71.262	-38 19 34.95	0.35	2	70.184				17575
21765	-30	19263	7.8	G5	39 07.231	0.08	4	70.675	-30 17 25.45	0.18	4	70.675				17576
21766	-48	14284	8.5	K2	22 39 08.729	0.06	4	70.659	-48 26 15.01	0.12	4	70.659				2708
21767	-72	2714	9.6	G5	39 11.472	0.21	3	71.001	-72 24 03.46	0.37	3	71.001				20388
21768	-34	15697	9.1	K0	39 16.193	0.09	4	70.886	-33 50 11.20	0.19	4	70.886				17577
21769	-39	14800	8.8	K0	39 20.931	0.08	4	71.019	-39 20 45.77	0.18	4	71.019				17578
21770	-10	5973	8.1	A5	39 22.094	--	1	71.773	-10 23 14.49	--	1	71.773	31673			17579
21771	-34	15701	8.0	G5	22 39 25.569	0.07	4	70.572	-34 32 21.71	0.18	4	70.572				17580
21772	- 5	5843	7.04	M0	39 30.045	0.09	2	71.668	- 5 21 48.56	0.42	2	71.668	31678			17581
21773	- 4	5733	7.7	A0	39 31.368	0.25	2	72.265	- 3 44 07.04	0.11	2	72.265	31679			17582
21774	-28	17892	7.7	K5	39 32.730	0.17	4	70.642	-27 38 40.10	0.20	4	70.642				17583
21775	-31	18933	8.72	G0	39 37.817	0.06	4	70.853	-30 54 43.73	0.13	4	70.853	31682			17584
21776	-47	14308	2.24	M3	22 39 41.711	0.03	81	71.157	-47 08 48.15	0.04	81	71.157	856	31685	4995	30856
21777	-62	6362	8.6	K0	39 43.480	0.10	3	70.140	-62 19 40.72	0.13	3	70.140				17585
21778*	- 1	4339	8.8	P5	39 49.802	0.20	4	70.080	- 1 03 13.03	0.33	4	70.080				28314
21779	-36	15516	9.2	G0	39 51.676	0.10	4	70.401	-36 04 05.56	0.20	4	70.401				17587
21780	-13	6247	7.9	A0	39 53.443	--	1	71.718	-12 49 18.41	--	1	71.718				17589
21781	-36	15518	8.9	F0	22 39 53.652	0.09	4	70.632	-35 36 32.08	0.13	4	70.632				17588
21782	-21	6287	8.6	K2	39 55.354	0.15	4	70.497	-21 12 27.19	0.16	4	70.497				17590
21783	- 2	5816	8.9	K0	40 01.395	0.09	2	70.629	- 2 18 24.98	0.31	2	70.629				17592
21784	- 0	4405	7.01	F0	40 08.816	--	1	71.554	- 0 11 27.59	--	1	71.554	31688			17593
21785	-30	19270	8.6	K0	40 11.837	0.16	4	70.662	-30 32 39.64	0.18	4	70.662				17594
21786	-38	15185	7.9	K2	22 40 13.071	0.13	4	70.585	-37 55 58.04	0.10	4	70.585				17595
21787	-22	5982	7.28	K0	40 18.918	0.07	4	69.952	-21 55 11.59	0.18	4	69.952	31691	4997		17596
21788	+ 4	4896	7.30	K2	40 21.062	--	1	71.748	+ 4 42 22.89	--	1	71.748	31692	4998		17597
21789	- 3	5491	8.2	B9	40 22.750	--	1	72.506	- 2 56 41.62	--	1	72.506				17599
21790	-42	16045	8.8	K5	40 23.941	0.08	4	70.770	-41 48 21.14	0.17	4	70.770				2709
21791	-18	6176	8.7	K0	22 40 33.502	--	1	71.732	-18 06 27.88	--	1	71.732				17600
21792	- 7	5837	8.1	G5	40 36.252	0.28	2	71.685	- 7 28 38.25	0.51	2	71.685	31700			17601
21793	-42	16049	4.89	K0	40 36.406	0.14	6	71.018	-41 40 34.01	0.11	6	71.018	3818	31701		33818
21794	-40	14882	7.8	M1	40 37.514	0.11	4	71.087	-40 23 27.87	0.09	4	71.087				2710
21795	- 7	5838	6.30	B9	40 37.666	0.15	6	70.169	- 7 13 30.89	0.15	6	70.169	3819	31703		33819
21796	+29	4741	3.10	G0	22 40 39.292	0.07	25	71.126	+29 57 32.73	0.10	25	71.126	857	31706	5002	80857
21797	-25	16071	8.5	K0	40 43.938	0.05	4	70.546	-24 38 34.92	0.37	4	70.546				17602
21798	-20	6473	9.0	F8	40 51.464	--	1	72.564	-19 36 41.37	--	1	72.564				17603
21799	-70	2957	8.6	K5	40 59.057	0.21	5	70.898	-70 02 25.56	0.15	5	70.898				20389
21800	-82	889	4.34	F0	41 03.784	0.02	160	70.945	-81 38 41.16	0.04	155	70.939	924	31712	5003	60924
21800	SP				22 41 03.756	0.02	173	70.979	-81 38 41.06	0.04	163	70.955	924	31712	5003	70924
21801	-34	15713	8.3	K0	41 12.409	0.14	4	70.312	-33 43 28.47	0.09	4	70.312				17604
21802	-68	3525	9.1	K2	41 17.594	0.12	3	69.989	-67 53 38.73	0.34	3	69.989				20390
21803	+ 3	4763	7.53	F8	41 18.129	--	1	72.468	+ 3 37 17.68	--	1	72.468	31717			17605
21804	-13	6257	8.6	K0	41 24.243	--	1	71.573	-12 56 55.59	--	1	71.573				17606
21805	-60	7594	7.84	G5	22 41 27.867	0.07	4	71.192	-60 22 47.03	0.31	4	71.192	31725			17607
21806	-56	9944	8.7	K0	41 30.127	0.37	3	70.093	-56 25 32.94	0.20	3	70.093				17608
21807	-58	7993	7.7	K0	41 31.349	0.07	3	70.063	-57 43 15.11	0.35	3	70.063				17609
21808	-59	7824	8.5	K0	41 35.862	0.07	2	70.521	-58 43 52.49	0.19	2	70.521				17610
21809	-15	6264	7.60	G5	41 37.712	0.22	2	71.276	-14 52 28.54	0.16	2	71.276			5004	17611
21810	-31	18945	8.8	G0	22 41 41.148	0.16	4	70.593	-31 23 33.37	0.35	4	70.593				17612
21811	-26	16302	8.6	K0	41 44.256	0.09	3	70.073	-26 33 19.59	0.11	3	70.073				17613
21812	-63	4815	9.2	K0	42 01.031	0.12	3	70.713	-62 49 32.07	0.07	3	70.713				17614
21813	-19	6330	8.6	G0	42 11.989	0.04	2	71.706	-19 04 53.81	0.00	2	71.706				17615
21814	-46	14420	8.0	F8	42 13.679	0.15	4	70.840	-45 50 53.31	0.06	4	70.840				2711

21755 A 16173, 6.6m-6.6m, 0°1.

21778 A 16190AB, 8.9m-8.9m, 0°2.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	PK4	GC	N30	No*
21815	-66	3706	7.97	K0	22 42 14.901	0.14	2	71.254	-66 21 46.49	0.32	2	71.254		31737		20391
21816	-23	17583	8.4	G5	42 18.542	0.09	4	70.705	-23 14 53.78	0.15	4	70.705				17616
21817	-5	5855	8.5	A3	42 18.751	0.08	2	72.164	-5 10 43.87	0.11	2	72.164				17617
21818	-76	1564	7.36	A2	42 25.508	0.14	6	70.786	-75 41 08.49	0.13	6	70.786	3820	31740		33820
21818	SP				42 25.517	0.18	6	70.325	-75 41 08.48	0.19	6	70.325	3820	31740		53820
21819	-54	10123	4.86	K0	22 42 34.479	0.12	6	70.578	-53 45 49.01	0.10	6	70.578	3821	31744		33821
21820	-32	17229	8.6	K2	42 45.971	0.20	4	70.371	-32 22 10.52	0.20	4	70.371				17618
21821	+0	4921	7.44	K0	42 49.864	--	1	71.759	+1 29 22.53	--	1	71.759			5008	17619
21822	-17	6586	8.9	K0	42 53.846	--	1	71.748	-16 50 11.67	--	1	71.748				17620
21823	-27	16044	7.7	K2	42 57.459	0.14	4	70.162	-27 14 32.47	0.06	4	70.162				17621
21824	+18	5046	6.45	K0	22 43 02.031	0.03	50	71.064	+19 06 09.99	0.05	50	71.064	1596	31753	5009	81596
21825	-47	14323	9.42	G0	43 05.250	0.08	2	70.237	-47 28 13.19	0.21	2	70.237		31756		2712
21826	-49	13955	6.80	G0	43 08.717	0.26	2	70.638	-49 14 31.00	0.04	2	70.638		31757		2713
21827	-34	15725	8.8	K0	43 09.101	0.12	4	70.735	-34 04 30.06	0.09	4	70.735				17622
21828	-1	4346	7.8	K0	43 15.473	--	1	72.760	-1 11 46.75	--	1	72.760				17623
21829	-49	13956	8.4	K2	22 43 20.752	0.23	3	70.500	-48 39 13.37	0.20	3	70.500				2714
21830	-53	10345	8.2	K5	43 28.893	0.09	3	69.042	-53 13 44.50	0.31	3	69.042				17625
21831	-12	6342	8.5	K0	43 29.067	--	1	71.874	-11 48 08.82	--	1	71.874				17626
21832	-36	15550	9.1	G5	43 35.703	0.12	4	70.733	-36 24 15.40	0.25	4	70.733				17627
21833	-51	13379	7.60	M3	43 41.120	0.27	4	70.378	-51 18 49.87	0.12	4	70.378		31767		2715
21834	-10	5986	8.1	K0	22 43 41.786	--	1	72.836	-9 57 41.53	--	1	72.836		31768		17628
21835	-9	6054	8.4	K0	43 43.709	0.21	2	71.826	-8 39 10.03	0.30	2	71.826				17629
21836	-78	1457	8.7	K0	43 49.196	0.18	4	70.377	-77 43 44.52	0.29	4	70.377				20392
21836	SP				43 49.266	0.40	4	69.216	-77 43 44.14	0.19	4	69.216				20392
21837	-43	15152	7.7	K0	43 55.022	0.16	4	70.697	-42 47 48.44	0.12	4	70.697				2716
21838	-21	6301	8.8	K2	22 43 55.834	0.15	4	69.974	-20 31 29.76	0.15	4	69.974				17630
21839	+22	4709	4.14	K0	44 07.258	0.19	5	69.869	+23 18 07.44	0.20	4	69.658	859	31776	5013	30859
21840	+4	4903	7.8	A5	44 08.219	0.39	2	71.246	+4 38 39.88	0.07	2	71.246				17631
21841	-21	6303	8.0	F8	44 08.301	0.08	3	69.951	-21 03 17.00	0.10	3	69.951				17632
21842	+1	4648	8.7	K5	44 13.389	--	1	71.847	+1 41 54.99	--	1	71.847				17633
21843	-44	15041	8.2	K2	22 44 14.370	0.11	4	70.927	-44 09 35.73	0.13	4	70.927				2717
21844	-66	3709	6.52	K0	44 15.006	0.06	6	70.804	-65 49 27.44	0.14	6	70.804	3823	31779		33823
21845	-55	9897	8.9	K0	44 15.136	0.23	4	69.934	-54 40 35.79	0.11	4	69.934		31780		17634
21846	-35	15506	9.2	G5	44 19.375	0.56	3	70.668	-35 36 00.89	0.17	3	70.668				17635
21847	-40	14905	7.9	G5	44 24.615	0.07	4	71.272	-39 43 12.60	0.11	4	71.272				17636
21848	-3	5505	7.5	F5	22 44 37.722	--	1	71.776	-2 58 24.54	--	1	71.776				17637
21849	-16	6152	7.36	G0	44 40.066	--	1	71.784	-16 24 35.82	--	1	71.784				17638
21850	-36	15556	8.5	G5	44 43.868	0.14	4	71.239	-35 47 03.22	0.03	4	71.239				17639
21851	-7	5858	8.2	F0	44 45.911	0.31	3	72.122	-6 59 39.77	0.45	3	72.122				17641
21852	-18	6193	8.6	K0	44 47.520	--	1	72.564	-17 50 32.84	--	1	72.564				17642
21853	-20	6486	5.43	G5	22 44 51.970	0.05	28	71.373	-19 52 33.09	0.06	28	71.373	1597	31794	5014	31597
21854	-2	5826	7.58	K2	44 55.268	0.09	7	72.294	-2 03 10.22	0.10	7	72.294	1598	31796	5015	31598
21855	-44	15047	8.5	K2	44 56.651	0.13	6	71.892	-43 38 20.30	0.10	5	71.587				2718
21856	+2	4562	8.4	G0	44 57.202	0.22	2	71.015	+2 38 25.92	0.17	2	71.015				17643
21857	-56	9957	9.1	K0	45 02.483	0.21	4	69.946	-56 03 19.62	0.09	4	69.946				17644
21858	-57	10145	9.2	G7	22 45 07.237	0.07	4	70.399	-57 15 12.03	0.04	4	70.399				17646
21859	-24	17332	8.5	K0	45 07.337	0.11	3	69.937	-24 23 09.27	0.20	3	69.937				17645
21860	-26	16324	6.48	G5	45 11.904	0.10	6	69.989	-26 10 31.39	0.09	6	69.989	3824	31806	5019	17648
21861	-29	18461	8.3	K0	45 15.861	0.11	3	70.034	-28 47 04.19	0.06	3	70.034				17649
21862	-4	5759	8.67	F5	45 18.616	--	1	71.844	-4 29 35.84	--	1	71.844		31811		17650
21863	-38	15220	9.0	K2	22 45 21.246	0.15	4	70.420	-38 18 42.64	0.12	4	70.420				17651
21864	-22	6001	8.2	G5	45 23.871	0.11	4	71.183	-21 53 36.93	0.15	4	71.183				17652
21865	-45	14807	8.9	K0	45 26.561	0.20	4	71.149	-44 45 56.02	0.18	4	71.149				2719
21866	-65	4087	8.6	K2	45 30.096	0.09	4	70.673	-64 43 19.84	0.06	4	70.673				20393
21867	-64	4299	8.5	K0	45 30.643	0.24	4	71.100	-63 48 58.31	0.20	4	71.100				17653
21868	-51	13389	3.69	A2	22 45 32.925	0.03	64	70.657	-51 34 50.83	0.04	64	70.657	860	31813	5020	30860
21869	+3	4774	8.23	K0	45 33.622	--	1	71.565	+3 44 48.85	--	1	71.565		31814		17655
21870	-55	9904	9.1	K2	45 40.809	0.16	4	70.760	-54 37 27.47	0.12	4	70.760				17656
21871	-34	15749	9.1	K2	45 44.213	0.05	4	70.511	-34 26 06.44	0.21	4	70.511				17658
21872	-11	5923	6.15	F0	45 52.427	0.09	6	69.844	-10 49 12.21	0.13	6	69.844	3825	31822		33825
21873	-52	12073	8.50	K5	22 46 05.182	0.23	4	69.977	-52 10 53.59	0.31	4	69.977		31827		17661
21874	-17	6598	8.0	K5	46 13.687	0.18	2	71.225	-17 15 35.28	0.04	2	71.225				17662
21875	-40	14913	8.0	K0	46 13.880	0.04	4	70.136	-40 08 16.41	0.14	4	70.136				2720
21876	-25	16123	8.0	F0	46 17.507	0.12	3	69.126	-25 11 13.69	0.04	3	69.126				17663
21877	-30	19308	8.9	K0	46 18.299	0.19	3	69.336	-30 08 22.93	0.09	3	69.336				17664
21878	-4	5764	8.7	F8	22 46 25.700	0.18	2	72.207	-3 39 07.68	0.01	2	72.207		31828		17665
21879	-31	18982	8.0	A0	46 30.635	0.12	3	69.364	-31 28 05.80	0.04	3	69.364				17666
21880	-59	7834	7.53	K2	46 32.734	0.11	4	70.208	-59 11 38.70	0.17	4	70.208		31829		17667
21881	-53	10351	8.2	K0	46 33.423	0.15	4	69.865	-53 34 27.03	0.29	4	69.865				17668
21882	-26	16332	9.0	K	46 35.628	--	1	68.585	-25 48 50.15	--	1	68.585				17669
21883	-35	15529	7.8	B9	22 46 40.075	0.21	4	70.583	-35 14 56.99	0.14	4	70.583				17670
21884	-12	6357	7.9	A5	46 48.480	0.29	2	71.771	-11 36 50.45	0.17	2	71.771				17671
21885	-14	6354	4.21	K5	46 56.727	0.04	49	71.625	-13 51 25.99	0.04	48	71.649	861	31836	5023	30861
21886	-56	9965	7.9	K2	47 09.013	0.07	4	69.975	-56 10 48.32	0.13	4	69.975				17672
21887	-21	6310	8.4	A2	47 14.621	0.24	4	69.298	-20 32 59.77	0.15	4	69.298				17673

21849 A 16265, 10.2m, 27°, 336°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
21888	-61	6690	9.0	F5	22 47 18.421	0.10	5	69.811	-61 19 14.87	0.22	5	69.811				17674
21889	-0	4423	8.9	K5	47 18.986	0.33	2	72.062	-0 24 07.46	0.06	2	72.062				17675
21890	-73	2271	8.9	K0	47 21.327	0.17	4	69.173	-73 34 22.05	0.21	4	69.173				20394
21891	-11	5933	8.4	K0	47 29.376	0.25	2	71.699	-10 40 21.89	0.22	2	71.699				17676
21892	-36	15588	8.9	G5	47 29.928	0.11	4	70.330	-36 33 34.49	0.17	4	70.330				17677
21893	+23	4615	3.67	K0	22 47 35.401	0.14	11	70.465	+24 20 12.69	0.20	11	70.465	862	31851	5024	30862
21894	-14	6355	8.2	F0	47 45.230	0.15	2	70.095	-14 19 27.94	0.20	2	70.095				17678
21895	-15	6282	8.8	F5	47 54.313	0.15	2	71.691	-14 59 48.66	0.08	2	71.691				17679
21896	-13	6283	8.4	K0	47 55.616	0.16	2	72.045	-12 57 23.54	0.36	2	72.045				17680
21897	-23	17630	8.4	K2	47 58.133	0.14	4	69.528	-22 58 33.38	0.20	4	69.528				17681
21898	-1	4351	7.32	A2	22 48 08.415	0.01	2	71.226	-0 50 35.62	0.18	2	71.226			5027	17682
21899	-27	16073	8.7	G0	48 09.558	0.08	4	69.709	-27 33 03.33	0.17	4	69.709				17683
21900	-8	5964	7.29	K0	48 09.935	0.12	2	71.239	-7 34 37.82	0.32	2	71.239		31862		17684
21901	-39	14848	5.39	K2	48 11.794	0.04	51	70.969	-39 25 19.82	0.04	51	70.950	1599	31863	5028	31599
21902	-19	6346	8.6	G0	48 15.383	0.06	2	72.021	-19 00 14.01	0.18	2	72.021				17685
21903	-60	7609	8.0	K0	22 48 17.606	0.16	4	69.143	-59 37 29.85	0.25	4	69.143				17686
21904	-37	14957	8.8	K5	48 24.243	0.14	4	70.361	-37 22 30.58	0.17	4	70.361				17687
21905	-42	16098	7.44	K5	48 28.669	0.17	4	70.744	-41 50 50.54	0.23	4	70.744		31866		2721
21906	-33	16256	9.0	G5	48 29.553	0.04	4	71.081	-33 14 05.29	0.11	4	71.081				17688
21907	-24	17362	7.58	K0	48 35.024	0.05	4	69.943	-24 01 51.42	0.18	4	69.943		31867		17689
21908	-10	6002	8.4	K2	22 48 35.146	0.16	2	72.121	-9 35 25.73	0.06	2	72.121				17690
21909	-60	7610	6.40	K0	48 36.588	0.06	6	69.175	-60 08 49.25	0.13	6	69.175	3826	31869		33826
21910	+2	4569	8.6	K0	48 40.564	0.21	3	72.116	+2 36 04.68	0.16	3	72.116				17691
21911	-32	17276	8.6	K5	48 43.717	0.14	5	71.210	-32 13 35.66	0.09	5	71.210				17692
21912	-4	5775	8.8	K5	48 48.012	0.10	2	71.221	-3 30 01.49	0.09	2	71.221				17693
21913*	-47	14371	8.5	G0	22 48 55.991	0.09	4	71.030	-47 02 31.79	0.16	4	71.030				2722
21914	-20	6495	8.6	G5	49 06.072	0.14	2	71.792	-19 44 08.26	0.06	2	71.792				17694
21915	+1	4657	8.6	F5	49 08.285	-	1	70.756	+1 30 47.57	-	1	70.756				17695
21916	+4	4916	7.17	F0	49 09.374	0.05	2	71.239	+4 31 12.71	0.11	2	71.239		31878		17696
21917	-39	14854	7.32	K0	49 19.089	0.13	4	70.659	-39 13 04.42	0.05	4	70.659		31882		17697
21918	-48	14345	7.62	K0	22 49 31.162	0.21	4	71.158	-48 15 31.12	0.18	4	71.158		31885		2723
21919	-65	4090	7.5	K2	49 31.593	0.10	4	69.935	-65 10 25.83	0.10	4	69.935				20395
21920	-46	14461	7.6	K0	49 32.068	0.08	4	71.139	-46 15 25.78	0.20	4	71.139				2724
21921	-63	4828	7.58	G5	49 38.331	0.14	3	68.740	-63 04 55.30	0.25	3	68.740		31893		17698
21922	-17	6615	8.3	K0	49 47.524	0.13	2	71.274	-16 55 21.24	0.29	2	71.274				17699
21923	+9	5122	5.30	F5	22 49 52.620	0.08	7	69.540	+9 34 09.84	0.11	6	69.386	3828	31899	5032	33828
21924	-19	6351	6.91	F8	49 55.207	0.39	2	71.720	-19 18 13.15	0.02	2	71.720		31900		17700
21925	-29	18485	7.64	G5	49 57.265	0.14	4	69.628	-29 26 51.68	0.15	4	69.628		31901		17701
21926	-41	15063	9.0	F2	49 59.000	0.07	4	70.394	-41 16 11.31	0.16	4	70.394				2725
21927	-55	9912	9.2	M0	49 59.780	0.15	4	70.587	-55 05 42.86	0.19	4	70.587				17702
21928	+2	4573	6.86	A0	22 50 00.242	0.16	3	72.101	+3 17 11.32	0.29	3	72.101		31902		17703
21929	-8	5968	3.84	M0	50 00.399	0.04	54	71.811	-7 50 45.19	0.04	54	71.811	864	31903	5034	30864
21930	-3	5521	7.8	G5	50 05.279	0.24	2	72.064	-2 53 31.30	0.07	2	72.064				17704
21931	-45	14844	7.5	K0	50 07.610	0.07	4	70.571	-45 07 28.60	0.17	4	70.571				2726
21932	-25	16153	7.8	K0	50 08.769	0.20	4	69.683	-25 28 22.52	0.27	3	69.402				17705
21933	-50	13818	9.3	G5	22 50 10.505	0.08	4	70.425	-49 49 37.34	0.11	4	70.425				2727
21934	-30	19336	8.4	K2	50 11.209	0.28	4	69.674	-30 29 22.85	0.16	4	69.674				17706
21935	-58	8009	7.8	K2	50 12.884	0.19	4	70.410	-58 07 13.30	0.13	4	70.410				17707
21936	-33	16273	9.4	G5	50 18.640	0.14	5	71.948	-32 42 33.90	0.16	4	71.581				17708
21937	+3	4787	8.2	K5	50 28.277	0.21	2	72.694	+3 46 10.67	0.36	2	72.694				17709
21938	+16	4831	5.72	K0	22 50 34.440	0.19	6	70.127	+16 34 31.22	0.17	6	70.127	3829	31908		33829
21939	-11	5944	9.1	G5	50 36.677	-	1	71.732	-11 18 23.24	-	1	71.732				17710
21940	-80	1057	8.35	K2	50 37.984	0.11	3	70.027	-79 59 09.67	0.14	3	70.027		31911		20396
21940 SP					50 38.009	0.05	4	68.672	-79 59 09.27	0.18	4	68.672		31911		20396
21941	-40	14944	7.28	K0	50 40.625	0.13	4	70.326	-39 41 10.59	0.24	4	70.326		31912		17711
21942	-38	15262	9.2	G0	22 50 53.425	0.14	4	70.938	-37 51 30.53	0.12	4	70.938				17712
21943	-27	16095	8.5	A2	50 53.779	0.08	4	69.444	-27 14 51.83	0.11	4	69.444				17713
21944	-72	2730	8.7	K2	50 54.678	0.07	4	70.691	-72 27 08.31	0.13	4	70.691				20397
21945	-36	15611	9.1	G5	50 57.708	0.14	3	70.558	-36 15 11.74	0.16	3	70.558				17714
21946	-6	6088	8.4	K0	51 02.016	-	1	69.538	-6 22 30.47	-	1	69.538				17715
21947	-50	13822	9.18	A0	22 51 05.904	0.07	5	71.006	-49 48 11.19	0.11	5	71.006		31924		2728
21948	-5	5880	7.64	K0	51 08.756	-	1	72.744	-4 55 25.45	-	1	72.744		31925		17716
21949	-70	2971	6.14	G0	51 12.373	0.04	58	70.665	-70 20 27.52	0.06	57	70.669	865	31926	5039	30865
21950	-31	19020	8.9	G5	51 22.898	0.12	4	69.506	-31 10 44.66	0.11	4	69.506				17720
21951	-73	2274	8.9	K0	51 31.987	0.15	4	70.939	-73 20 10.94	0.24	4	70.939				20398
21952	-65	4095	7.8	K5	22 51 39.501	0.15	4	69.774	-65 35 52.37	0.12	4	69.774				20399
21953	-42	16122	8.0	F5	51 40.898	0.07	4	70.706	-42 05 45.46	0.10	4	70.706				2729
21954	-1	4355	8.2	G5	51 43.884	-	1	72.754	-1 18 55.91	-	1	72.754				17723
21955	-35	15565	9.0	G5	51 48.108	0.19	4	71.212	-34 49 51.59	0.22	4	71.212				17724
21956	-7	5886	6.33	K0	51 57.923	0.35	2	71.338	-7 28 15.65	0.14	2	71.338		31942		17725
21957	-16	6173	3.51	A2	22 51 59.844	0.02	114	70.947	-16 05 14.36	0.03	114	70.947	866	31943	5040	80866
21958	-48	14354	8.6	A3	52 05.119	0.06	4	71.598	-47 45 05.66	0.01	4	71.598				2730
21959	-75	1766	7.92	K0	52 12.317	0.18	5	70.527	-75 15 44.28	0.08	5	70.527		31947		20400
21959 SP					52 12.252	0.25	4	69.170	-75 15 44.28	0.18	3	69.181		31947		20400
21960	-23	17665	6.72	F5	52 12.987	0.08	4	70.325	-22 38 02.96	0.10	4	70.325		31948		17726

21913 SDS, 9.9m-10.1m, 1°8, 337°.

CATALOG OF 23,001 STARS FOR 1950.0

539

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
21961	-47 14392	7.53	K0	22 52 16.905	0.09	4	70.821	-46 56 43.36	0.12	4	70.821		31950		2731
21962	-65 4096	9.1	G5	52 26.163	0.12	4	69.490	-64 38 38.28	0.11	4	69.490				20401
21963	-37 14981	6.38	K0	52 26.915	0.16	6	69.727	-36 39 19.78	0.11	6	69.727	3831	31957		33831
21964	-43 15197	8.46	F8	52 33.552	0.07	4	70.907	-43 09 04.54	0.08	4	70.907		31959		2732
21965	-38 15273	8.8	K0	52 33.893	0.17	4	71.237	-38 18 21.66	0.11	4	71.237				17727
21966	-44 15091	8.9	F8	22 52 42.023	0.20	4	70.326	-43 55 30.96	0.19	4	70.326				2733
21967	-10 6018	8.6	G5	52 49.271	0.02	2	71.808	-10 22 48.10	0.12	2	71.808				17728
21968	-41 15082	6.82	K0	53 03.874	0.10	4	70.902	-41 21 51.03	0.19	4	70.902		31969		2734
21969	-27 16109	8.23	G5	53 09.917	0.11	4	70.683	-26 55 28.10	0.07	4	70.683		31973		17729
21970	-8 5980	8.6	G5	53 12.531	0.07	2	71.789	-8 05 21.76	0.05	2	71.789				17730
21971	-21 6325	8.8	K0	22 53 13.998	0.15	4	70.666	-20 47 55.23	0.18	4	70.666				17731
21972	-58 8018	8.8	K0	53 22.095	0.15	4	69.956	-58 02 49.30	0.20	4	69.956				17732
21973	-37 14992	8.3	F5	53 24.201	0.15	4	70.399	-36 56 49.82	0.10	4	70.399				17733
21974	-76 1565	9.1	K2	53 28.789	0.08	4	69.659	-76 00 26.86	0.08	4	69.659				20402
21974 SP				53 28.769	0.03	4	68.672	-76 00 26.40	0.17	4	68.672				20402
21975	-14 6370	8.5	K2	22 53 31.586	0.12	2	70.578	-13 49 19.44	0.02	2	70.578				17734
21976	-13 6303	8.8	G0	53 31.617	0.37	2	71.269	-12 40 10.26	0.11	2	71.269				17735
21977	-15 6305	8.0	K0	53 51.350	0.08	2	71.221	-15 15 24.67	0.01	2	71.221				17736
21978	-48 14364	5.90	A3	53 53.365	0.09	7	69.580	-48 14 12.17	0.11	6	69.433	3832	31980		33832
21979	-45 14874	9.0	K0	54 11.169	0.07	4	70.529	-45 00 26.76	0.09	4	70.529				2735
21980	-11 5953	8.5	A0	22 54 12.179	0.38	2	70.806	-10 31 49.09	0.08	2	70.806				17737
21981	-17 6625	8.6	G5	54 14.523	0.32	2	70.761	-16 32 16.58	0.09	2	70.761				17738
21982	-55 9919	9.2	K0	54 21.874	0.11	4	69.000	-55 12 26.87	0.15	4	69.000				17739
21983	-22 6030	9.4	G5	54 22.982	0.28	4	71.218	-22 19 35.71	0.43	4	71.218				17740
21984	-70 2981	8.9	G5	54 27.462	0.10	4	70.662	-69 43 10.02	0.30	4	70.662				20403
21985	-4 5793	6.58	A0	22 54 31.934	0.10	2	71.157	-3 30 46.01	0.02	2	71.157		31993		17741
21986	-62 6378	8.7	K5	54 32.434	0.13	4	69.320	-62 07 43.08	0.07	4	69.320				17742
21987	-24 17414	8.5	K0	54 36.807	0.11	4	70.007	-24 06 23.41	0.19	4	70.007				17743
21988	-74 2049	8.61	K0	54 45.882	0.14	4	69.716	-74 02 41.73	0.18	4	69.716		31997		20404
21989	-34 15831	8.2	K2	54 47.745	0.11	4	70.117	-34 11 00.85	0.05	4	70.117				17744
21990	-30 19370	1.29	A3	22 54 54.046	0.04	49	70.891	-29 53 19.15	0.06	49	70.891	867	32000	5050	30867
21991	-21 6334	7.7	K0	54 56.435	0.23	3	70.955	-20 32 32.45	0.03	3	70.955				17745
21992	-33 16319	7.9	F2	54 59.930	0.20	4	70.099	-33 27 51.55	0.11	4	70.099				17746
21993	+3 4799	6.43	K2	55 00.074	0.10	6	70.066	+3 32 32.01	0.20	6	70.066	3834	32002	5051	33834
21994	-35 15584	9.1	K0	55 04.087	0.17	4	70.582	-35 15 58.88	0.06	4	70.582				17747
21995	-23 17682	8.4	G5	22 55 04.750	0.09	4	69.316	-22 52 42.31	0.20	4	69.316				17748
21996	-38 15288	7.30	K0	55 05.003	0.11	4	70.136	-38 12 10.26	0.11	4	70.136		32005		17749
21997	-60 7619	9.0	K0	55 16.235	0.23	4	69.885	-59 40 34.65	0.16	4	69.885				17750
21998	-19 6374	8.1	K5	55 23.164	0.18	2	71.149	-19 14 26.32	0.03	2	71.149				17751
21999	-51 13437	8.85	F2	55 28.835	0.12	5	70.868	-51 03 59.39	0.21	5	70.868		32011		2736
22000	-16 6184	8.8	G5	22 55 31.796	0.06	2	71.222	-16 10 25.14	0.07	2	71.222				17752
22001	-33 16324	8.8	K5	55 32.649	0.10	4	70.617	-33 32 11.17	0.17	4	70.617				17753
22002	-51 13438	7.82	G5	55 34.028	0.14	4	70.438	-51 23 43.56	0.12	4	70.438		32012		2737
22003	-3 5539	6.21	G5	55 40.985	0.06	6	70.622	-2 39 47.38	0.09	6	70.622	3836	32015	5054	33836
22004	-68 3547	8.1	G5	55 46.528	0.21	4	70.438	-67 48 42.72	0.09	4	70.438				20405
22005	-72 2739	7.4	M1	22 55 47.818	0.13	4	70.435	-72 06 17.04	0.13	4	70.435				20406
22006	-2 5858	6.40	F2	55 49.264	0.33	2	71.228	-1 40 41.46	0.15	2	71.228		32018		17754
22007	-68 3548	8.9	K0	55 49.714	0.09	4	70.216	-68 28 33.99	0.13	4	70.216				20407
22008	-40 14979	8.9	K0	55 53.736	0.07	4	70.054	-40 11 15.88	0.14	4	70.054				2739
22009	-5 5897	8.5	K5	55 55.086	0.16	2	71.770	-4 46 12.43	0.24	2	71.770		32020		17755
22010	-28 18010	8.4	K0	22 55 55.646	0.13	4	70.272	-28 34 24.85	0.25	4	70.272				17756
22011	-87 331	9.22	M0	55 56.268	0.03	3	70.013	-86 38 35.52	0.20	3	70.013		32019		20408
22011 SP				55 56.297	0.13	4	69.767	-86 38 35.49	0.21	4	69.767		32019		20408
22012	+2 4588	8.5	K2	55 57.941	0.20	2	70.571	+3 10 47.42	0.16	2	70.571				17757
22013	-6 6112	8.7	K5	56 00.018	0.03	2	72.022	-5 56 31.18	0.40	2	72.022				17758
22014*	+8 4973	6.50	G0	22 56 03.461	0.24	4	70.697	+9 05 24.22	0.09	4	70.697		32021		28366
22015	-46 14499	8.4	F0	56 09.733	0.11	4	70.397	-45 43 27.08	0.15	4	70.397				2738
22016	-44 15112	8.8	F5	56 10.069	0.03	4	70.629	-44 12 13.41	0.10	4	70.629				2740
22017	-60 7621	7.86	K2	56 11.982	0.16	3	69.070	-60 25 29.51	0.10	3	69.070		32024		17759
22018	-37 15022	8.8	K5	56 16.436	0.08	4	71.107	-37 32 56.68	0.14	4	71.107				17760
22019	-1 4364	7.7	K0	22 56 18.904	0.17	2	71.310	-0 35 02.60	0.28	2	71.310				17761
22020	-8 5991	8.7	A0	56 23.256	0.01	2	71.311	-8 28 53.40	0.01	2	71.311		32028		17762
22021*	+10 4859	5.79	F0	56 41.654	0.11	5	70.137	+11 27 39.33	0.14	4	70.056		32034	5057	28368
22022	-61 6711	8.2	G5	56 50.485	0.20	4	70.334	-61 05 38.80	0.26	4	70.334				17763
22023	-7 5902	8.6	A2	56 53.177	0.45	2	71.250	-6 52 31.82	0.38	2	71.250				17764
22024	-3 5544	8.2	K2	22 56 54.525	0.17	2	71.808	-3 09 14.06	0.11	2	71.808				17765
22025	-13 6318	6.27	K2	56 57.736	0.26	2	72.120	-13 20 21.03	0.45	2	72.120		32038		17766
22026	-31 19072	7.9	M0	57 01.393	0.10	4	69.627	-31 23 41.65	0.12	4	69.627				17767
22027	-35 15602	8.5	M0	57 05.008	0.03	4	70.605	-35 18 32.44	0.17	4	70.605				17768
22028p	-57 10172	9.1	F2	57 05.427	0.17	4	70.907	-56 55 53.05	0.09	4	70.907				17769
22029	-11 5968	8.6	G0	22 57 11.213	0.08	2	72.164	-11 09 12.32	0.06	2	72.164				17770
22030	-53 10377	9.19	G5	57 19.264	0.18	4	70.995	-53 05 25.19	0.23	3	71.078		32048		17771
22031	-27 16139	8.5	F8	57 26.368	0.11	4	69.652	-26 55 59.86	0.20	4	69.652				17772
22032	-25 16222	8.7	K2	57 28.128	0.07	4	69.970	-25 19 30.91	0.12	4	69.970				17773
22033	+1 4671	8.9	A0	57 40.790	--	1	71.748	+2 08 18.91	--	1	71.748				17774

22014 A 16417, 7.0m-7.5m, 0°2.
 22021 A 16428, 6.0m-7.5m, 0°9.

22028 11.5m, 7°0, 151°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	α	N_α	Epoch α	Decl 1950.0	δ	N_δ	Epoch δ	FK4	GC	N30	No*
22034	-26	16419	6.44	K0	22 57 42.174	0.06	4	69.939	-25 53 42.95	0.62	4	69.939		32055		17775
22035	-9	6100	6.86	F2	57 43.358	0.21	2	72.273	-9 08 56.49	0.48	2	72.273		32057		17776
22036	-50	13851	7.29	A3	57 52.848	0.15	4	70.956	-49 43 12.98	0.13	4	70.956		32059		2741
22037	-53	10382	4.18	G5	57 56.150	0.05	38	71.012	-53 01 22.13	0.05	38	71.012	868	32061	5060	30868
22038	-40	14992	8.3	G0	57 59.757	0.15	4	70.929	-40 09 50.12	0.05	4	70.929				2742
22039	-49	14026	7.68	K2	22 58 01.920	0.09	4	70.876	-49 12 42.53	0.16	4	70.876		32064		2743
22040	-0	4443	6.40	K0	58 04.069	0.13	6	70.209	-0 04 58.49	0.18	6	70.209	3840	32065	5061	33840
22041	+2	4594	5.96	K0	58 09.989	--	1	71.502	+2 44 37.30	--	1	71.502		32067		17777
22042	-39	14910	8.0	K0	58 28.334	0.16	3	70.702	-39 06 45.36	0.35	3	70.702				17781
22043	-35	15614	9.3	G5	58 34.780	0.25	3	70.714	-35 21 48.07	0.15	3	70.714				17783
22044	-57	10177	8.1	K2	22 58 36.591	0.23	4	70.628	-57 33 25.28	0.17	4	70.628				17784
22045	-43	15229	9.0	F8	58 40.028	0.27	3	70.706	-42 42 43.17	0.16	3	70.706				2744
22046	-23	17706	6.32	A2	58 41.895	0.14	6	69.388	-23 03 34.45	0.13	6	69.388	3842	32077		33842
22047	+0	4955	8.6	M0	58 42.894	--	1	69.538	+0 48 56.29	--	1	69.538				17785
22048	-71	2738	8.5	K2	58 45.204	0.20	4	70.965	-70 53 45.48	0.13	4	70.965				20409
22049	-52	12101	8.6	K0	22 58 47.216	0.09	3	70.032	-52 21 22.20	0.18	3	70.032				17786
22050	-66	3736	8.70	K0	58 49.011	0.13	4	69.982	-66 17 02.66	0.11	4	69.982		32080		20410
22051	-70	2984	9.2	K0	58 50.811	0.31	4	70.227	-69 57 02.64	0.06	4	70.227				20411
22052	-47	14433	8.0	K0	59 14.377	0.17	3	70.661	-46 58 12.95	0.23	3	70.661				2745
22053	-4	5804	7.60	K0	59 15.824	--	1	71.680	-4 06 57.54	--	1	71.680		32089		17788
22054	-29	18542	8.6	K0	22 59 15.830	0.04	4	68.903	-29 31 12.65	0.14	4	68.903				17789
22055	-54	10185	8.4	G5	59 19.165	0.11	4	70.227	-54 17 09.38	0.11	4	70.227				17790
22056	-15	6330	8.5	M2	59 31.447	--	1	71.776	-15 14 43.58	--	1	71.776				17796
22057	-32	17365	9.2	K5	59 44.809	0.10	2	70.262	-32 11 33.54	0.07	2	70.262				17797
22058	-0	4449	7.4	F8	59 50.698	0.10	2	71.684	+0 10 10.55	0.01	2	71.684				17798
22059	-49	14037	9.0	K2	22 59 59.932	0.04	4	70.677	-49 19 59.86	0.14	4	70.677				2746
22060	-35	15627	9.1	F8	23 00 07.302	0.18	4	70.929	-34 38 05.60	0.14	4	70.929				17799
22061	-37	15049	8.2	K0	00 08.489	0.07	4	70.569	-36 45 07.23	0.10	4	70.569				17800
22062	-30	19405	9.0	K0	00 10.518	0.10	4	70.101	-30 07 19.72	0.09	4	70.101				17801
22063	-14	6396	8.9	F2	00 14.282	0.07	2	71.673	-13 36 28.67	0.03	2	71.673				17802
22064	-48	14397	8.5	K0	23 00 17.337	0.06	5	71.710	-48 20 30.63	0.14	5	71.710				2747
22065	-10	6045	8.9	A5	00 28.335	0.09	2	72.138	-9 50 24.99	0.12	2	72.138				17803
22066	-1	4382	7.7	G5	00 34.423	--	1	72.520	-0 41 51.86	--	1	72.520		32117		17804
22067	-39	14921	7.19	K5	00 42.723	0.10	4	70.444	-38 42 10.98	0.13	4	70.444		32121		17805
22068	-35	15630	5.13	F0	00 44.214	0.04	56	71.398	-35 01 10.79	0.05	56	71.398	1601	32122	5069	31601
22069	-21	6356	8.9	K2	23 00 44.878	0.19	3	69.370	-20 52 24.88	0.17	3	69.370				17806
22070	-37	15056	8.9	K2	00 47.644	0.05	4	71.167	-37 00 39.99	0.10	4	71.167				17807
22071	-51	13459	9.0	K2	00 54.505	0.14	4	69.921	-50 43 09.41	0.14	4	69.921				2748
22072	-32	17375	8.0	K5	01 07.657	0.10	4	70.591	-32 22 47.65	0.13	4	70.591				17808
22073	-77	1561	8.2	K2	01 08.386	0.14	4	70.261	-77 11 54.37	0.22	4	70.261				20412
22073 SP					23 01 08.364	0.16	4	69.648	-77 11 53.98	0.22	4	69.648				20412
22074	-41	15124	9.5	K0	01 10.795	0.12	4	70.793	-41 05 13.68	0.08	4	70.793				2749
22075	-46	14530	8.8	G5	01 11.291	0.12	3	70.683	-45 39 18.36	0.27	3	70.683				2750
22076	+1	4675	8.1	K2	01 11.965	--	1	72.564	+2 20 21.57	--	1	72.564				17809
22077	-26	16453	8.0	K0	01 12.801	0.10	4	70.390	-26 01 33.74	0.08	4	70.390				17810
22078	-25	16255	8.6	G0	23 01 14.709	0.08	4	70.320	-25 18 23.31	0.17	4	70.320				17811
22079	-50	13868	8.5	G5	01 18.524	0.10	3	71.289	-50 32 10.32	0.16	3	71.289				2751
22080	+3	4818	4.58	B5p	01 19.880	0.16	8	71.548	+3 33 01.54	0.14	8	71.548	1602	32134	5070	31602
22081	+27	4480	2.6v	M0	01 21.049	0.16	9	70.639	+27 48 43.36	0.14	9	70.639	870	32135	5071	30870
22082	-5	5917	6.65	G0	01 21.485	--	1	72.575	-5 03 53.58	--	1	72.575		32136		17812
22083	-28	18060	8.35	K5	23 01 24.256	0.10	4	70.253	-28 30 28.28	0.06	4	70.253		32138		17813
22084	-34	15882	9.5	A5	01 27.362	0.07	2	70.217	-34 04 18.15	0.01	2	70.217				17814
22085	+2	4603	7.7	F2	01 32.191	--	1	72.596	+3 01 25.75	--	1	72.596		32140		17815
22086	-69	3301	5.64	F0	01 35.598	0.05	6	70.303	-69 05 26.77	0.10	6	70.303	3843	32141	5072	33843
22087	-30	19416	8.7	K5	01 36.935	0.21	3	70.050	-30 33 21.38	0.07	3	70.050				17816
22088	-42	16179	8.5	K2	23 01 38.560	0.09	4	71.263	-42 20 38.85	0.12	4	71.263				2752
22089	-67	3941	8.6	K0	01 39.473	0.14	4	70.428	-67 23 57.56	0.15	4	70.428				20413
22090	-54	10197	5.26	K5	01 43.000	0.07	6	69.579	-54 14 02.21	0.04	6	69.579	3845	32143	5073	33845
22091	-52	12107	8.3	K0	01 43.573	0.10	4	69.888	-52 02 49.16	0.20	4	69.888				17817
22092	-7	5925	8.0	K0	01 47.151	0.20	2	72.189	-6 57 33.61	0.18	2	72.189				17818
22093	-12	6413	8.1	K0	23 01 52.860	0.04	2	72.829	-12 26 56.75	0.02	2	72.829				17819
22094	-27	16172	6.82	A3	02 08.029	0.03	3	70.589	-27 24 21.51	0.16	3	70.589		32146		17820
22095	-5	5921	8.7	K5	02 11.869	0.14	2	72.317	-5 25 59.32	0.39	2	72.317				17821
22096	+14	4926	2.57	A0	02 16.154	0.03	70	70.749	+14 56 08.24	0.05	70	70.749	871	32149	5074	80871
22097	-63	4845	9.2	G0	02 17.250	0.08	4	70.686	-63 32 00.67	0.35	4	70.686				17822
22098	-54	10199	8.4	K0	23 02 19.040	0.10	4	70.239	-54 00 06.97	0.13	4	70.239				17823
22099	-63	4846	7.8	A0	02 19.133	0.14	4	69.974	-62 39 40.00	0.11	4	69.974				17824
22100	-24	17478	8.4	F0	02 19.693	0.08	4	69.926	-24 06 43.26	0.11	4	69.926				17825
22101	+3	4821	7.6	K2	02 24.618	0.14	2	72.160	+4 19 47.58	0.05	2	72.160				17826
22102	-39	14927	8.8	K5	02 24.851	0.09	5	70.756	-39 09 44.67	0.14	5	70.756				17827
22103	-10	6052	8.6	F0	23 02 25.305	--	1	72.798	-9 51 12.17	--	1	72.798				17828
22104	+3	4822	8.0	F8	02 27.295	0.38	2	71.775	+3 57 23.65	0.36	2	71.775		32151		17829
22105	-17	6661	6.34	K0	02 34.157	0.10	4	71.524	-17 20 56.39	0.16	4	71.524	3846	32154		17830
22106	-60	7629	8.6	F8	02 37.464	0.12	4	70.622	-60 20 59.20	0.15	4	70.622				17831
22107	-8	6019	7.55	K0	02 42.478	--	1	71.863	-8 01 28.19	--	1	71.863		32160		17832

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
22108	-21	6359	8.8	G5	23 02 42.887	0.16	4	69.734	-20 54 38.78	0.13	4	69.734				17833
22109	+ 0	4963	6.38	K0	02 44.116	0.06	2	71.319	+ 1 02 13.73	0.09	2	71.319		32162		17834
22110	-31	19104	8.0	K5	02 44.742	0.12	4	69.436	-31 04 52.72	0.08	4	69.436				17835
22111	-46	14539	9.0	K0	02 45.416	0.06	4	70.401	-45 59 38.92	0.18	4	70.401				2753
22112	-61	6722	7.97	K5	02 46.036	0.07	3	70.305	-61 27 45.73	0.05	3	70.305		32164		17836
22113	-66	3741	8.7	K5	23 02 46.150	0.13	4	69.926	-65 36 36.92	0.24	4	69.926				20414
22114	-41	15134	9.0	K2	02 53.293	0.17	4	70.330	-40 51 16.80	0.08	4	70.330				2754
22115	-33	16385	8.9	G5	03 02.659	0.08	4	70.343	-33 19 05.22	0.16	4	70.343				17837
22116	-11	5996	8.0	A3	03 12.879	0.13	2	71.307	-11 09 35.30	0.03	2	71.307				17838
22117	-16	6208	7.8	F5	03 14.606	0.01	2	71.181	-15 43 22.28	0.16	2	71.181				17839
22118	-15	6343	8.1	G5	23 03 18.538	0.25	2	70.767	-14 42 54.00	0.01	2	70.767				17840
22119	-56	9999	8.1	K0	03 24.714	0.20	4	70.576	-56 14 09.46	0.16	4	70.576				17841
22120	-85	550	9.01	K	03 26.134	0.11	4	69.661	-85 09 02.26	0.08	4	69.661		32176		20415
22120 SP					03 26.173	0.10	4	69.723	-85 09 02.31	0.18	4	69.723		32176		20415
22121	-45	14928	8.7	G0	03 26.761	0.04	4	70.206	-44 49 48.13	0.11	4	70.206				2755
22122	-22	6061	8.7	K0	23 03 34.669	0.05	4	69.034	-22 12 26.80	0.16	4	69.034				17842
22123	-10	6058	7.3	K0	03 40.514	0.31	3	71.348	- 9 52 33.98	0.21	3	71.348				17843
22124	-48	14414	8.5	A2	03 46.676	0.09	5	71.133	-48 10 51.41	0.21	5	71.133				2756
22125	-44	15146	8.07	G0	03 50.401	0.08	4	70.405	-43 46 26.78	0.14	4	70.405		32180		2757
22126	- 9	6118	8.7	F8	03 57.902	0.13	2	71.304	- 8 54 55.42	0.17	2	71.304				17844
22127	-20	6541	8.6	F8	23 03 59.248	0.11	2	71.797	-19 43 48.06	0.20	2	71.797				17845
22128	-58	8040	8.8	K2	04 00.567	0.18	4	69.559	-57 35 53.93	0.12	4	69.559				17846
22129	-53	10404	8.5	K0	04 02.267	0.09	4	69.915	-53 03 04.89	0.22	4	69.915				17847
22130	-56	10001	8.9	K0	04 07.880	0.09	4	69.888	-55 49 08.92	0.16	4	69.888				17848
22131	+ 4	4959	7.8	K5	04 14.164	0.16	2	72.092	+ 4 45 55.29	0.33	2	72.092				17849
22132	-50	13885	6.32	K0	23 04 17.096	0.10	4	70.584	-49 52 36.47	0.23	4	70.584		32189		2758
22133	-13	6344	8.5	F8	04 21.782	0.22	2	72.013	-13 00 06.60	0.04	2	72.013		32191		17850
22134	-46	14548	8.2	K0	04 21.926	0.22	6	71.263	-46 06 47.27	0.13	5	71.543				2759
22135	-80	1064	6.20	A2	04 24.432	0.10	6	69.437	-79 45 04.84	0.23	6	69.437	3847	32194	5079	33847
22135 SP					04 24.481	0.18	6	69.019	-79 45 04.98	0.12	6	69.019	3847	32194	5079	53847
22136	+ 8	4997	4.69	M0	23 04 29.036	0.03	73	71.810	+ 9 08 20.35	0.04	73	71.810	1603	32196	5080	31603
22137	-82	892	9.3	K0	04 29.170	0.17	4	69.865	-81 48 52.05	0.21	3	69.649				20416
22137 SP					04 29.113	0.11	4	70.144	-81 48 51.74	0.29	4	70.144				17851
22138	+ 2	4609	7.1	K0	04 29.624	0.17	2	71.308	+ 2 46 53.28	0.01	2	71.308				20417
22139	-67	3944	8.7	K0	04 32.358	0.12	4	68.943	-66 55 22.33	0.25	4	68.943				17852
22140	-35	15664	7.8	K2	23 04 33.158	0.09	4	70.346	-35 08 11.35	0.19	4	70.346				2760
22141	-43	15270	8.5	M0	04 39.378	0.08	4	70.591	-43 14 40.18	0.17	4	70.591				33848
22142	+24	4716	4.98	K0	04 40.371	0.11	7	70.324	+25 11 52.65	0.22	6	70.301	3848	32201		17853
22143	-12	6426	7.6	A2	04 47.279	0.04	2	71.214	-12 04 37.57	0.75	2	71.214				17854
22144	-58	8043	8.7	K0	04 49.691	0.11	4	70.242	-58 34 44.49	0.14	4	70.242				17855
22145	-36	15718	8.0	M0	23 04 50.185	0.05	4	70.462	-36 20 32.48	0.19	4	70.462				33850
22146	+20	5278	5.93	A5	05 00.690	0.08	6	70.541	+20 51 50.20	0.11	6	70.541	3850	32209		17856
22147	-38	15364	8.6	K0	05 05.116	0.13	4	70.119	-37 37 06.50	0.20	4	70.119				17857
22148	- 2	5886	8.9	K0	05 06.181	0.17	2	71.791	- 2 22 34.27	0.16	2	71.791				17858
22149	- 1	4393	7.3	K0	05 11.797	0.00	2	71.741	- 0 34 00.36	0.28	2	71.741				17859
22150	- 6	6147	8.5	K0	23 05 15.313	0.21	3	72.122	- 5 58 06.24	0.09	3	72.122				33851
22151	+29	4862	7.25	B9	05 15.345	0.08	6	71.008	+29 47 00.59	0.20	6	71.008	3851	32215	5083	28387
22152	+11	4940	7.8	F0	05 17.846	0.16	4	70.075	+12 24 08.83	0.12	4	70.075			5084	17860
22153	-19	6404	8.6	G5	05 23.586	0.35	2	70.767	-19 28 35.32	0.08	2	70.767				17861
22154	+ 2	4614	7.9	K2	05 28.813	0.40	2	71.226	+ 3 18 08.46	0.07	2	71.226				20418
22155	-76	1572	8.4	G0	23 05 36.966	0.09	4	69.694	-76 10 08.31	0.16	4	69.694				20418
22155 SP					05 36.919	0.12	4	70.238	-76 10 07.79	0.27	4	70.238				2761
22156	-49	14062	9.3	K2	05 48.363	0.21	4	70.144	-49 15 56.94	0.25	4	70.144				17862
22157	- 9	6128	8.7	K5	05 50.532	0.04	2	72.336	- 9 16 50.13	0.14	2	72.336		32229		17863
22158	- 1	4394	7.34	F5	05 51.966	0.34	2	71.751	- 0 46 13.15	0.18	2	71.751		32230		2762
22159	-51	13480	8.5	K0	23 05 59.030	0.05	4	69.924	-51 23 19.16	0.09	4	69.924				2763
22160	-40	15039	8.5	K2	06 03.405	0.05	4	70.461	-40 32 04.81	0.13	4	70.461				17864
22161	-19	6408	8.4	G0	06 04.074	-	1	72.798	-19 01 22.03	-	1	72.798				33854
22162	+ 1	4686	5.56	G5	06 07.401	0.08	7	71.293	+ 1 51 21.58	0.12	6	71.700	3854	32233	5088	17865
22163	-26	16495	6.78	F5	06 10.751	0.03	3	69.908	-26 06 05.45	0.26	3	69.908		32234		2764
22164	-47	14472	9.3	K5	23 06 14.895	0.23	4	71.107	-46 59 49.45	0.19	4	71.107				17866
22165	-18	6257	8.9	F8	06 15.045	0.11	2	71.330	-17 42 09.80	0.02	2	71.330				20419
22166	-79	1228	8.5	K2	06 15.649	0.12	5	70.765	-79 02 08.76	0.13	5	70.765				20419
22166 SP					06 15.471	0.12	4	69.654	-79 02 09.41	0.21	4	69.654				17867
22167	-30	19448	7.4v	M1	06 22.955	0.16	4	69.420	-30 24 18.50	0.22	4	69.420				17868
22168	-14	6412	9.0	G0	23 06 24.558	0.08	2	70.649	-13 59 15.75	0.28	2	70.649				17869
22169	- 3	5577	8.3	K2	06 35.126	0.02	2	71.681	- 2 31 52.61	0.02	2	71.681		32241		17870
22170	-32	17408	8.6	K0	06 35.703	0.14	4	70.378	-32 26 08.69	0.20	4	70.378				20420
22171	-88	201	8.48	K5	06 39.848	0.07	4	69.709	-88 13 57.71	0.13	4	69.709		32244		17871
22171 SP					06 39.567	0.15	4	69.161	-88 13 57.78	0.15	4	69.161		32244		17872
22172	- 4	5830	9.0	F8	23 06 40.310	0.32	2	72.324	- 4 12 35.19	0.36	2	72.324				17873
22173	-27	16200	8.6	K0	06 41.490	0.21	4	69.728	-27 22 10.56	0.14	4	69.728				17874
22174	-21	6368	3.80	K0	06 47.064	0.03	51	71.203	-21 26 38.24	0.05	51	71.203	873	32246	5090	30873
22175	-54	10213	9.2	F5	06 47.502	0.18	4	69.422	-53 37 18.65	0.09	4	69.422				17873
22176	+ 1	4687	7.8	K2	06 49.230	-	1	71.538	+ 1 52 23.01	-	1	71.538		32247		17874

22167 7.4m to 9.0m.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
22177	-31	19145	9.3	G5	23 06 57.368	0.16	4	70.255	-31 10' 53.03	0.24	4	70.255				17875
22178	-23	17767	8.5	K0	06 59.561	0.06	4	70.668	-23 22 15.96	0.05	4	70.668				17876
22179*	-4	5833	8.5	F0	07 01.930	0.15	2	72.595	-4 14 01.08	0.21	2	72.595				17877
22180	-28	18099	6.06	K0	07 02.809	0.10	7	70.128	-28 21 36.02	0.07	6	70.073	3855	32256	5092	33855
22181	+2	4618	8.8	K0	07 06.115	0.42	2	72.618	+3 31 02.51	0.21	2	72.618				17878
22182	-77	1563	8.06	M3	23 07 10.168	0.11	3	70.703	-76 44 05.38	0.20	3	70.703		32258		20421
22182	SP				07 10.182	0.14	4	70.166	-76 44 05.53	0.31	4	70.166		32258		20421
22183	-15	6360	6.23	A0	07 11.829	0.16	6	70.833	-14 46 54.79	0.15	6	70.833	3856	32261		33856
22184	-7	5943	8.6	G0	07 13.267	0.10	2	72.168	-7 21 41.94	0.09	2	72.168				17879
22185	-60	7639	7.6	K0	07 16.625	0.07	4	69.901	-59 38 28.31	0.07	4	69.901				17880
22186	-11	6015	8.4	G0	23 07 20.717	0.04	2	71.797	-10 47 17.58	0.71	2	71.797				17881
22187	-38	15380	9.4	K0	07 23.517	0.12	4	71.193	-38 02 53.91	0.16	4	71.193				17882
22188	-34	15921	8.0	K5	07 23.694	0.04	4	70.414	-34 10 48.28	0.22	4	70.414				17883
22189	-29	18601	7.8	K0	07 25.400	0.10	4	70.284	-29 13 01.59	0.08	4	70.284				17884
22190	-16	6224	8.8	A2	07 26.383	--	1	72.506	-16 27 36.06	--	1	72.506				17885
22191	-36	15740	7.8	K5	23 07 32.308	0.15	4	70.860	-35 40 13.28	0.19	4	70.860				17887
22192	-45	14947	4.10	K0	07 32.435	0.03	76	70.713	-45 31 05.09	0.03	76	70.713	1605	32270	5095	31605
22193	-27	16203	8.3	G5	07 33.456	0.15	4	70.634	-27 33 33.17	0.09	4	70.634				17888
22194	-24	17522	8.6	K0	07 42.475	0.09	3	70.127	-24 31 20.00	0.16	3	70.127				17889
22195	-14	6413	7.4	K2	07 43.278	--	1	71.784	-13 54 58.88	--	1	71.784				17890
22196	-6	6157	7.01	B8	23 08 04.259	--	1	71.617	-6 13 55.29	--	1	71.617		32284	5097	17892
22197	-34	15927	7.8	K0	08 11.815	0.03	4	70.153	-33 53 44.77	0.05	4	70.153				17893
22198	-21	6372	8.3	G5	08 11.999	0.05	4	70.752	-21 17 22.53	0.23	4	70.752				17894
22199	-19	6416	8.8	K0	08 24.227	0.08	2	72.160	-18 55 09.29	0.01	2	72.160				17895
22200	-15	6365	8.4	K0	08 37.317	0.24	2	72.167	-15 27 21.22	0.06	2	72.167				17896
22201	+4	4975	6.86	M3	23 08 41.538	0.09	2	71.814	+4 43 57.67	0.20	2	71.814		32299	5099	17897
22202	-5	5945	8.5	K0	08 42.020	0.14	2	72.145	-5 22 14.02	0.18	2	72.145				17898
22203	-13	6355	8.5	A5	08 45.791	0.08	2	71.725	-12 58 25.41	0.50	2	71.725				17899
22204	-73	2280	8.6	G5	08 48.549	0.14	4	69.867	-72 41 42.93	0.11	4	69.867				20422
22205	-11	6021	8.8	F0	08 52.355	0.05	2	71.315	-10 46 51.99	0.39	2	71.315				17900
22206	-3	5584	8.3	K2	23 09 02.569	0.14	2	71.300	-3 22 20.93	0.05	2	71.300				17901
22207	-1	4401	9.0	K0	09 07.394	0.39	2	72.614	-1 24 23.57	0.29	2	72.614				17902
22208	+7	4991	5.15	A3	09 12.598	0.02	102	71.224	+8 26 53.65	0.03	101	71.226	1606	32302	5100	81606
22209	-62	6403	8.3	G5	09 17.398	0.32	4	70.696	-61 36 17.30	0.17	4	70.696				17903
22210	-26	16523	8.7	A5	09 28.740	0.11	4	69.520	-25 40 32.91	0.09	4	69.520				17904
22211	-4	5841	8.3	K0	23 09 38.245	0.09	2	71.198	-4 12 33.64	0.10	2	71.198				17905
22212	-64	4328	8.8	M1	09 39.847	0.14	4	69.726	-64 09 32.68	0.12	4	69.726				20423
22213	-24	17535	8.0	F5	09 49.850	0.17	4	68.949	-24 05 29.32	0.04	4	68.949				17906
22214	-9	6145	8.9	G5	09 52.071	0.45	2	71.254	-8 33 07.43	0.21	2	71.254				17907
22215	-46	14574	8.5	K0	09 56.502	0.08	4	70.116	-45 44 27.11	0.16	4	70.116				2765
22216	-52	12124	9.1	G5	23 09 59.692	0.11	4	70.146	-51 57 27.40	0.08	4	70.146				17908
22217	-40	15069	8.8	K2	10 03.007	0.16	4	70.424	-39 45 37.47	0.24	4	70.424				17909
22218	-40	15071	9.0	G0	10 06.096	0.14	4	70.431	-40 03 00.64	0.06	4	70.431				2766
22219*	-22	6088	8.5	G0	10 06.946	0.18	4	69.476	-22 12 38.32	0.18	4	69.476				17910
22220	-65	4113	9.2	K5	10 10.072	0.12	5	71.480	-64 40 17.91	0.13	5	71.480				20424
22221	-54	10226	8.48	K0	23 10 11.838	0.26	4	70.198	-54 33 33.18	0.22	4	70.198		32313		17911
22222	-44	15179	8.0	K2	10 12.082	0.18	4	70.618	-44 20 00.52	0.06	4	70.618				2767
22223	-55	9968	8.30	A2	10 12.488	0.12	4	69.938	-55 22 42.12	0.12	4	69.938		32314		17912
22224	-63	4861	8.9	K2	10 14.849	0.19	4	70.224	-63 10 17.42	0.28	4	70.224				17913
22225	-61	6732	8.9	G0	10 23.993	0.10	4	71.132	-60 43 03.98	0.14	4	71.132				17914
22226*	-50	13915	6.61	G5	23 10 24.968	0.04	4	70.610	-49 53 26.96	0.11	4	70.610		32318		2768
22227	-0	4483	7.9	G5	10 26.536	0.30	2	70.746	-0 14 29.02	0.07	2	70.746				17915
22228	-43	15300	9.0	K0	10 35.245	0.23	4	70.897	-43 03 24.44	0.31	4	70.897				2769
22229	-30	19477	7.8	K0	10 36.529	0.14	4	69.036	-30 19 35.47	0.11	4	69.036				17916
22230	-56	10028	8.5	K0	10 42.858	0.31	3	70.946	-56 21 09.65	0.33	3	70.946				17917
22231	-68	3563	7.7	K0	23 10 43.821	0.13	4	70.194	-68 33 49.11	0.04	4	70.194		32325		20425
22232	-49	14089	8.08	K0	10 44.085	0.08	4	70.434	-49 04 21.16	0.12	4	70.434				2770
22233	-71	2754	8.1	K0	10 47.256	0.14	5	70.654	-71 28 57.93	0.13	5	70.654				20426
22234	-73	2281	8.4	K0	10 47.315	0.18	4	70.416	-73 25 22.22	0.11	4	70.416				20427
22235	+1	4695	7.6v	G5	10 50.597	0.10	2	71.741	+2 24 10.05	0.22	2	71.741			5102	17918
22236	-27	16223	7.9	K0	23 10 50.624	0.21	4	69.271	-26 48 46.88	0.09	4	69.271				17919
22237*	-9	6146	8.0	F0	10 51.594	0.16	6	70.063	-9 10 49.52	0.23	6	70.063				17920
22238	+0	4978	8.1	F0	10 54.846	0.00	2	71.706	+0 39 30.17	0.40	2	71.706				17921
22239	+10	4902	5.94	K0	10 55.415	0.11	6	70.143	+10 47 33.70	0.11	6	70.143	3858	32331		33858
22240	-47	14501	7.5	K0	11 00.788	0.14	4	70.682	-47 28 00.25	0.07	4	70.682				2771
22241	-71	2755	8.9	K0	23 11 03.747	0.18	4	69.705	-70 36 38.99	0.31	4	69.705				20428
22242	-36	15779	9.2	K0	11 12.267	0.13	4	70.962	-36 29 06.18	0.14	4	70.962				17922
22243	-42	16236	8.9	K0	11 24.360	0.25	4	70.422	-41 59 11.80	0.25	4	70.422				2772
22244	-59	7875	9.0	K0	11 28.152	0.15	4	69.869	-58 47 37.36	0.05	3	69.629				17923
22245	+2	4635	8.8	G5	11 31.113	0.61	2	71.698	+3 02 15.25	0.05	2	71.698				17924
22246*	-3	5592	7.19	A2	23 11 32.009	0.15	7	70.319	-2 54 26.29	0.11	6	70.296		32345		17925
22247	-57	10228	7.9	K5	11 33.862	0.09	4	69.202	-57 30 34.00	0.15	4	69.202				17926
22248	-17	6705	7.6	K0	11 39.505	0.01	2	70.095	-17 10 53.78	0.07	2	70.095				17927
22249	-6	6170	4.40	M0	11 44.041	0.03	76	71.866	-6 19 12.27	0.03	75	71.865	1607	32346	5106	31607
22250	-29	18624	8.13	G5	11 51.061	0.10	4	69.409	-28 43 52.36	0.15	4	69.409		32347		17928

22179 A 16551, 8.8m-11.1m, 1°5, 138°.

22219 A 16592, SDS, 8.8m-9.6m, 1°1, 309°.

22226 SDS, 6.8m-8.4m, 0°5.

22235 7.6m to 9.2m.

22237 A 16604, 8.6m-9.6m, 0°7, 33°.

22246 A 16613, 7.5m-10°m, 0°4, 121°.

CATALOG OF 23,001 STARS FOR 1950.0

543

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
22251	-20	6560	8.4	K0	23 11 56.379	0.11	4	69.617	-20 17 28.67	0.20	4	69.617				17929
22252	-31	19187	9.2	K0	11 57.716	0.12	4	69.931	-31 24 47.25	0.25	4	69.931				17930
22253	-78	1468	8.1	K0	11 59.088	0.13	4	69.368	-78 10 02.36	0.37	4	69.368				20429
22253	SP				11 59.003	0.16	4	69.172	-78 10 01.69	0.23	4	69.172				20429
22254	-22	6093	8.5	K0	11 59.479	0.09	4	69.624	-21 52 07.82	0.18	4	69.624				17931
22255	-26	16547	7.7	K0	23 12 04.218	0.11	4	68.981	-25 50 08.51	0.14	4	68.981				17932
22256	-15	6374	9.0	K0	12 05.253	0.37	2	71.200	-14 43 08.03	0.38	2	71.200				17933
22257	-10	6086	8.1	A3	12 05.665	0.37	2	71.202	-9 57 38.81	0.15	2	71.202				17934
22258	-34	15955	9.2	G0	12 08.647	0.20	4	70.346	-34 18 26.80	0.19	4	70.346				17935
22259	-39	14968	7.8	K2	12 10.664	0.19	4	70.194	-39 27 02.25	0.17	4	70.194				17936
22260	-41	15197	5.76	K0	23 12 12.753	0.05	6	69.195	-41 22 37.91	0.12	6	69.195	3859	32357	5107	33859
22261	-1	4409	8.8	G5	12 20.858	0.05	2	71.205	-1 19 43.99	0.14	2	71.205				17937
22262	-42	16245	9.0	K2	12 26.698	0.11	4	70.137	-42 13 41.09	0.10	4	70.137				2773
22263	-60	7644	7.67	K2	12 33.703	0.23	4	69.632	-59 58 01.16	0.08	4	69.632	32363			17938
22264	-74	2058	8.7	G5	12 33.796	0.23	4	69.930	-74 08 55.73	0.09	4	69.930				20430
22265	-67	3954	8.2	K0	23 12 36.227	0.12	3	69.338	-67 26 41.51	0.12	3	69.338				20431
22266	-6	6174	8.0	G5	12 37.725	0.07	2	70.752	-6 23 40.75	0.39	2	70.752				17939
22267	-25	16354	7.14	A3	12 39.337	0.20	3	69.430	-25 07 28.69	0.09	3	69.430	32364			17940
22268	-14	6429	7.6	K0	12 43.745	0.23	2	71.673	-14 17 17.63	0.01	2	71.673				17941
22269	-49	14100	9.0	K0	12 46.488	0.11	4	71.065	-48 49 14.45	0.13	4	71.065				2774
22270	-35	15716	8.4	F5	23 12 50.451	0.12	4	71.095	-35 28 46.04	0.27	4	71.095				17942
22271	-4	5852	5.55	A2	12 59.670	0.14	6	70.472	-3 46 09.16	0.13	6	70.472	3860	32369	5110	33860
22272	-12	6454	8.1	K5	13 00.012	0.16	2	71.694	-11 54 18.05	0.20	2	71.694				17943
22273	-27	16244	8.4	A0	13 02.229	0.10	4	70.003	-27 27 04.79	0.24	4	70.003				17944
22274	+2	4643	8.8	K2	13 15.637	0.08	2	71.722	+2 43 04.37	0.35	2	71.722				17945
22275	-9	6156	4.48	K0	23 13 16.878	0.07	13	71.664	-9 21 37.93	0.12	13	71.664	1608	32374	5111	31608
22276	-33	16455	8.7	A3	13 17.511	0.12	5	71.346	-33 25 14.96	0.09	5	71.346				17946
22277	-11	6038	8.8	K5	13 18.697	0.24	2	72.182	-10 38 25.98	0.09	2	72.182				17947
22278	+27	4521	6.50	G5	13 19.519	0.07	6	70.824	+27 58 30.11	0.33	6	70.824	3861	32375		33861
22279	-36	15793	7.8	K2	13 20.913	0.10	4	70.198	-35 57 22.16	0.17	4	70.198				17948
22280	-46	14595	8.8	K0	23 13 25.011	0.05	4	70.172	-46 18 58.94	0.16	4	70.172				2775
22281	-81	1028	8.88	K2	13 33.820	0.08	4	70.225	-80 39 58.33	0.07	4	70.225	32383			20432
22281	SP				13 33.731	0.14	4	69.161	-80 39 58.30	0.16	4	69.161	32383			20432
22282	-41	15202	8.9	K2	13 34.812	0.08	4	70.388	-41 13 24.41	0.12	4	70.388				2776
22283	-62	6411	8.9	K0	13 50.958	0.19	4	70.662	-62 08 02.23	0.04	4	70.662				17949
22284	-11	6040	8.2	F8	23 13 51.784	0.22	2	70.826	-10 29 03.04	0.15	2	70.826				17950
22285	-15	6383	8.9	K5	13 55.146	0.04	2	71.720	-14 45 49.11	0.45	2	71.720				17951
22286	-36	15794	9.03	G0	13 57.769	0.12	6	70.003	-35 38 00.83	0.09	6	70.003				21165
22287	-62	6412	5.69	G0	13 58.778	0.03	86	71.372	-62 16 27.14	0.04	86	71.363	876	32393	5113	30876
22288	-52	12133	8.43	M0	14 06.399	0.09	4	71.452	-52 08 07.28	0.16	4	71.452	32398			17952
22289	-51	13522	8.26	G0	23 14 08.711	0.22	4	69.970	-51 35 29.87	0.17	4	69.970				2777
22290	-21	6397	7.7	K0	14 10.852	0.23	4	68.925	-21 28 32.86	0.02	4	68.925				17953
22291	-19	6429	7.05	K0	14 20.445	0.70	2	70.534	-19 08 47.11	0.13	2	70.534	32404			17954
22292	-7	5975	6.68	F0	14 23.463	0.22	2	71.214	-7 26 03.85	0.26	2	71.214	32407			17955
22293	-55	9987	8.74	F5	14 25.591	0.10	3	71.302	-55 12 27.11	0.17	3	71.302	32410			17956
22294	-24	17580	8.9	K2	23 14 26.600	0.10	4	68.992	-24 15 01.33	0.25	4	68.992				17957
22295	-21	6398	8.1	F0	14 29.788	0.06	4	69.026	-20 57 29.17	0.06	4	69.026				17958
22296	-58	8062	4.10	F2	14 31.391	0.06	28	70.323	-58 30 35.10	0.06	28	70.323	877	32413	5114	30877
22297	+0	4984	8.6	K0	14 33.149	0.40	2	71.214	+0 57 29.98	0.05	2	71.214				17959
22298	+2	4648	3.85	K0	14 35.429	0.09	12	71.554	+3 00 32.04	0.11	12	71.554	878	32415	5115	30878
22299	-70	3002	9.1	K0	23 14 39.974	0.20	4	70.158	-69 38 07.17	0.13	4	70.158				20433
22300	+3	4847	8.6	G0	14 45.915	--	1	72.809	+4 10 42.01	--	1	72.809				17960
22301	-23	17828	8.0	F5	14 49.480	0.11	4	69.148	-23 05 16.27	0.12	4	69.148				17961
22302	-16	6254	6.57	B8	14 50.869	0.00	2	72.260	-16 26 43.85	0.31	2	72.260	32417			17962
22303	+16	4896	8.5	F5	15 01.126	0.22	4	70.667	+16 35 13.80	0.17	4	70.667				28414
22304*	-2	5920	8.2	G5	23 15 03.007	0.43	2	72.253	-1 47 39.53	0.14	2	72.253				17963
22305	-8	6082	8.3	K2	15 12.025	--	1	71.847	-7 48 57.82	--	1	71.847				17965
22306	-68	3567	6.04	K0	15 15.692	0.16	6	69.590	-67 44 41.62	0.14	6	69.590	3864	32426		33864
22307	-5	5963	8.5	F0	15 18.946	--	1	71.879	-4 47 43.04	--	1	71.879				17966
22308	-14	6441	6.82	K0	15 19.677	0.18	2	71.199	-14 04 06.33	0.13	2	71.199	32430			17967
22309	-3	5607	8.7	F8	23 15 21.955	0.28	2	72.165	-3 17 57.82	0.06	2	72.165				17968
22310	-32	17465	8.7	K5	15 29.070	0.29	4	70.130	-32 20 27.34	0.10	4	70.130				17969
22311	-55	9991	8.37	K2	15 35.803	0.09	4	69.205	-54 55 22.66	0.17	4	69.205	32438			17970
22312	-60	7648	7.66	K0	15 40.019	0.22	4	69.907	-60 16 24.32	0.24	4	69.907	32439			17971
22313	-25	16386	8.3	F8	15 44.357	0.19	4	69.659	-25 16 32.83	0.13	4	69.659				17972
22314	-0	4498	8.9	F8	23 15 46.649	--	1	72.836	+0 15 04.99	--	1	72.836				17973
22315	-2	5925	8.5	G0	15 53.301	0.11	2	71.317	-2 10 17.07	0.03	2	71.317				17974
22316	-48	14472	6.70	A0	15 58.646	0.10	6	70.857	-47 42 32.52	0.19	6	70.857	3866	32446	5119	33866
22317	-2	5926	8.9	F2	16 04.735	0.25	2	70.701	-2 11 57.40	0.05	2	70.701				17975
22318	-46	14609	8.5	K0	16 07.100	0.28	4	70.330	-46 26 10.79	0.10	4	70.330				2778
22319	-33	16476	4.51	K0	23 16 07.706	0.02	92	71.236	-32 48 18.29	0.03	92	71.236	879	32450	5120	30879
22320	-26	16580	7.8	K2	16 11.853	0.07	4	69.912	-26 12 59.32	0.09	4	69.912				17976
22321	-29	18652	8.02	A0	16 12.928	0.12	4	69.898	-29 00 52.43	0.11	4	69.898	32451			17977
22322	+2	4650	8.8	K5	16 15.093	0.19	2	71.218	+2 58 25.02	0.32	2	71.218	32455			17978
22323	-5	5965	8.7	K0	16 15.908	0.16	2	70.722	-5 22 24.17	0.28	2	70.722				17979

22263 SD8, 11.0m, 3rd 1, 9°.
22264 11.5m, 2nd 9, 278°.

22304 A 16649AB, 8.4m-10.0m, 1st 5, binary.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
22324	-71 2758	8.8	K0	23 16 20.705	0.12	4	69.478	-71 16' 42.56	0.12	4	69.478				20434
22325	-39 14991	9.4	K0	16 20.870	0.12	4	71.256	-39 29 43.70	0.14	4	71.256				17980
22326	-10 6094	5.16	A0	16 21.712	0.07	17	72.284	-9 53 03.77	0.08	17	72.284	1609	32459	5121	31609
22327	-37 15197	8.8	F5	16 30.406	0.20	4	70.638	-37 08 01.60	0.21	4	70.638				17981
22328	-54 10257	7.6	K5	16 33.103	0.06	4	70.354	-53 41 37.28	0.13	4	70.354				17982
22329	-58 8066	8.3	K2	23 16 40.552	0.16	4	69.914	-58 23 53.08	0.10	4	69.914				17983
22330	-36 15822	7.7	K0	16 41.320	0.14	6	71.515	-36 24 12.36	0.12	6	71.515				17984
22331	-39 14994	7.11	A2	16 41.959	0.15	7	71.043	-39 25 55.22	0.20	6	71.140	3867	32466		33867
22332	-18 6283	6.08	K0	16 46.328	0.12	6	71.177	-18 20 57.41	0.12	6	71.177	3868	32467	5124	33868
22333	-21 6403	8.9	K0	16 54.736	0.05	4	69.306	-20 58 39.01	0.08	4	69.306				17985
22334	-66 3766	9.1	K0	23 16 59.907	0.16	4	69.940	-66 24 27.92	0.18	4	69.940				20435
22335	-32 17470	8.9	K2	17 01.100	0.12	3	69.512	-31 37 42.12	0.06	3	69.512				17986
22336	-10 6095	8.5	G5	17 03.125	0.24	2	71.270	-9 57 01.83	0.28	2	71.270				17987
22337	-16 6259	7.44	G5	17 03.362	0.26	2	71.195	-16 03 21.56	0.14	2	71.195		32475		17988
22338	-39 14996	8.0	K2	17 05.739	0.17	4	71.571	-38 43 01.53	0.12	4	71.571				17989
22339	-76 1576	7.40	F2	23 17 17.006	0.11	6	70.376	-75 54 25.27	0.14	6	70.376	3869	32481	5126	33869
22339	SP			17 17.109	0.13	6	69.010	-75 54 25.87	0.18	6	69.010	3869	32481	5126	53869
22340	-35 15744	9.3	K0	17 32.634	0.27	3	70.595	-34 52 57.81	0.26	3	70.595				17990
22341	-33 16494	9.1	K0	17 37.295	0.17	3	70.619	-32 52 54.48	0.28	3	70.619				17991
22342	-38 15443	9.2	G0	17 38.070	0.04	3	70.757	-37 35 45.77	0.04	3	70.757				17992
22343	-33 16495	8.6	K5	23 17 39.656	0.19	4	71.231	-33 23 21.30	0.15	4	71.231				17993
22344	-4 5868	6.60	F2	17 40.700	0.43	2	71.236	-4 11 32.18	0.02	2	71.236		32489		17994
22345	-15 6400	8.7	K2	17 42.516	0.10	2	71.811	-14 40 10.30	0.48	2	71.811				17995
22346	-30 19515	9.1	K2	17 44.683	0.11	4	70.486	-30 21 13.65	0.26	4	70.486				17996
22347	-51 13538	9.0	G0	17 47.013	0.29	4	68.997	-50 41 54.60	0.28	4	68.997				2779
22348	+ 4 4997	5.18	K0	23 17 47.750	0.13	6	71.012	+ 5 06 28.28	0.08	6	71.012	3871	32491	5127	33871
22349	-47 14536	8.5	K0	18 01.666	0.16	4	70.928	-46 46 24.09	0.14	4	70.928				2780
22350	- 9 6171	8.4	A0	18 03.232	0.44	2	72.138	- 9 11 37.05	0.07	2	72.138				17997
22351	- 7 5989	8.6	K5	18 03.277	0.03	2	72.186	- 6 43 31.15	0.43	2	72.186				17998
22352	-34 15990	8.6	K2	18 05.063	0.09	4	71.665	-34 10 28.12	0.23	4	71.665				17999
22353	- 6 6191	6.30	G5	23 18 06.059	0.05	2	71.732	- 6 10 53.45	0.11	2	71.732		32500		18000
22354	-25 16415	9.0	A0	18 07.022	0.15	4	70.438	-25 25 43.37	0.06	4	70.438				18001
22355	-41 15228	8.3	K5	18 08.066	0.11	4	70.622	-41 13 45.81	0.16	4	70.622				2781
22356	+22 4810	4.65	A5	18 09.552	0.04	44	71.138	+23 27 59.02	0.07	43	71.197	880	32503	5129	80680
22357	-28 18159	8.7	G5	18 14.070	0.22	4	69.617	-27 57 05.24	0.24	4	69.617				18002
22358	-11 6053	7.8	G5	23 18 16.706	0.30	2	72.151	-10 48 23.66	0.16	2	72.151				18003
22359	-18 6289	8.7	K2	18 19.287	0.14	2	71.811	-17 51 35.73	0.13	2	71.811				18004
22360	+16 4912	6.55	F0	18 27.274	0.20	6	69.848	+16 58 42.11	0.15	6	69.848	3872	32509		33872
22361	-72 2756	8.0	K0	18 29.465	0.23	5	70.553	-71 50 55.32	0.06	5	70.553				20436
22362	-27 16284	5.81	G5	18 35.811	0.02	85	71.112	-27 15 39.05	0.03	85	71.112	1611	32511	5131	81611
22363	+ 1 4714	7.8	K0	23 18 37.950	0.01	2	71.716	+ 1 55 23.99	0.15	2	71.716				18005
22364	- 7 5993	8.2	F0	18 39.440	0.01	2	72.056	- 7 17 50.19	0.10	2	72.056				18006
22365	-45 15004	7.89	K2	18 43.001	0.21	4	70.350	-45 11 03.43	0.11	4	70.350		32512		2782
22366	-17 6733	8.4	F5	18 51.325	0.26	2	72.298	-16 57 45.80	0.02	2	72.298				18007
22367	-14 6456	8.6	K2	18 56.678	0.03	2	72.257	-14 18 24.34	0.12	2	72.257				18008
22368	-13 6391	7.4	K0	23 19 15.257	0.31	2	70.770	-12 43 23.18	0.52	2	70.770				18009
22369	-65 4133	8.1	F0	19 26.671	0.17	4	70.414	-65 32 10.60	0.22	4	70.414				20437
22370	-61 6738	8.5	G5	19 26.802	0.12	4	69.250	-61 34 19.04	0.13	4	69.250				18010
22371	-43 15352	7.35	K0	19 29.628	0.08	4	70.103	-43 27 41.17	0.09	4	70.103		32523		2783
22372	-41 15233	8.7	K2	19 29.845	0.06	5	71.709	-40 47 28.60	0.13	5	71.709				2784
22373	-63 4879	8.7	G5	23 19 37.810	0.20	3	69.729	-62 51 28.89	0.27	3	69.729				18011
22374	-37 15216	8.6	F5	19 42.487	0.15	4	70.707	-37 04 50.77	0.12	4	70.707				18012
22375	-48 14482	8.7	M0	19 45.095	0.37	4	70.947	-47 47 41.44	0.18	4	70.947				2785
22376	-57 10257	8.9	K0	19 48.687	0.18	4	69.527	-57 26 02.33	0.29	4	69.527				18013
22377	- 1 4420	8.8	K0	19 49.507	0.06	2	71.196	- 0 41 14.34	0.10	2	71.196		32529		18014
22378	+ 2 4657	8.6	K0	23 19 51.639	0.23	2	72.043	+ 3 19 54.53	0.22	2	72.043				18015
22379*	-15 6406	5.30	A3	20 02.131	0.43	2	71.714	-15 18 49.56	0.49	2	71.714		32531		18016
22380	- 1 4423	8.5	K5	20 05.025	0.00	2	71.724	- 1 25 33.50	0.17	2	71.724				18017
22381	-50 13959	8.0	K2	20 05.073	0.07	4	69.711	-50 27 52.38	0.23	4	69.711				2786
22382	+20 5317	6.22	A0	20 10.935	0.06	7	69.566	+20 33 15.96	0.13	6	69.416	3873	32535		33873
22383	+ 2 4658	8.1	F5	23 20 11.078	0.19	2	71.752	+ 3 27 56.34	0.04	2	71.752				18018
22384	-24 17620	7.28	F0	20 12.066	0.15	4	70.154	-23 43 33.17	0.09	4	70.154		32536	5133	18019
22385	-44 15220	9.2	M0	20 14.739	0.13	4	70.153	-44 25 26.42	0.14	4	70.153				2787
22386	+ 2 4660	6.92	A0	20 19.934	0.04	2	71.751	+ 2 32 38.03	0.23	2	71.751		32539		18020
22387	-20 6587	4.20	K0	20 20.594	0.03	76	71.350	-20 22 27.57	0.04	76	71.350	1612	32540	5136	31612
22388	-64 4347	8.06	K0	23 20 33.572	0.10	4	69.688	-63 48 37.14	0.28	4	69.688		32544		18021
22389	-25 16435	8.2	G0	20 34.272	0.20	4	69.928	-24 53 24.92	0.25	4	69.928				18022
22390	-42 16300	7.18	F0	20 34.867	0.06	4	70.208	-41 52 33.09	0.16	4	70.208		32546		2788
22391	-27 16297	8.6	G0	20 43.800	0.10	4	70.452	-26 40 01.06	0.26	4	70.452				18023
22392	-56 10062	8.7	K2	20 48.386	0.22	4	69.050	-56 22 06.77	0.23	4	69.050				18024
22393	- 4 5879	8.3	K2	23 20 48.663	0.22	2	71.207	- 3 29 23.13	0.22	2	71.207				18026
22394	- 1 4426	8.6	K0	20 48.697	0.06	2	70.591	- 1 13 16.96	0.26	2	70.591				18025
22395	- 9 6181	8.9	G0	20 50.874	0.08	2	71.762	- 9 09 25.48	0.15	2	71.762				18027
22396	-29 18676	8.5	F5	20 54.424	0.15	4	69.671	-29 16 29.45	0.18	4					

22379 A 16708, 5.6m-6.9m, 0".1.

CATALOG OF 23,001 STARS FOR 1950.0

545

No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch α	Decl 1950.0	ϵ_δ	N_δ	Epoch δ	FK4	GC	N30	No*
22398	-31	19267	7.62	M0	23 21 04.093	0.17	4	70.628	-31 23 07.63	0.17	4	70.628		32550		18030
22399	-35	15775	8.7	K5	21 04.541	0.15	4	70.555	-34 52 42.19	0.06	4	70.555				18031
22400	-23	17877	8.5	G5	21 05.930	0.14	4	70.171	-22 53 04.36	0.30	4	70.171				18032
22401	-19	6448	8.3	K0	21 06.955	0.16	2	71.289	-19 23 02.85	0.44	2	71.289				18033
22402	-60	7657	8.5	K0	21 08.466	0.16	4	69.982	-59 47 50.68	0.16	4	69.982				18034
22403	-43	15361	9.3	G0	23 21 10.090	0.17	4	70.634	-42 50 07.83	0.30	4	70.634				2793
22404	-48	14490	8.8	M1	21 13.182	0.08	4	70.638	-48 14 07.49	0.11	4	70.638				2789
22405	-53	10448	8.4	K0	21 21.590	0.17	4	69.960	-52 35 42.52	0.17	4	69.960				18035
22406	-39	15013	9.1	G5	21 21.930	0.14	4	71.097	-38 39 45.41	0.23	4	71.097				18036
22407	-88	204	5.56	K0	21 22.395	0.02	189	70.982	-87 45 27.09	0.04	188	70.977	925	32558	5139	60925
22407 SP					23 21 22.470	0.02	218	70.903	-87 45 26.95	0.03	213	70.882	925	32558	5139	70925
22408	-84	655	9.1	G5	21 24.143	0.16	3	69.684	-83 49 32.83	0.10	3	69.684				20438
22408 SP					21 24.245	0.15	4	70.145	-83 49 33.20	0.34	5	69.981				20438
22409*	-22	6119	6.54	F5	21 26.013	0.16	3	69.367	-22 02 54.39	0.04	3	69.367		32560		18037
22410	-18	6297	8.5	K0	21 27.842	0.09	2	71.318	-17 58 30.26	0.06	2	71.318				18038
22411	+ 4	5004	8.0	F0	23 21 31.496	0.04	2	72.073	+ 4 39 24.23	0.33	2	72.073				18039
22412	-45	15019	8.5	G5	21 41.155	0.19	5	70.996	-45 25 42.23	0.15	5	70.996				2790
22413	-50	13967	8.7	K0	21 43.730	0.09	4	70.853	-49 37 20.63	0.20	4	70.853				2791
22414	-7	6004	8.8	K0	21 51.957	0.27	2	71.299	-7 14 12.40	0.08	2	71.299				18040
22415	-76	1579	8.2	M1	21 53.935	0.12	4	70.616	-76 22 47.12	0.14	4	70.616				20439
22415 SP					23 21 53.918	0.24	4	70.200	-76 22 47.07	0.16	4	70.200				20439
22416	-54	10283	8.8	K2	21 55.248	0.14	4	70.128	-54 01 15.58	0.10	4	70.128				18041
22417	-73	2286	7.5	G5	21 56.475	0.20	4	70.147	-73 32 55.11	0.05	4	70.147				20440
22418	-34	16023	8.9	K0	21 57.713	0.13	4	70.942	-33 42 54.65	0.12	4	70.942				18042
22419	-16	6282	9.0	F8	22 00.753	0.09	2	71.830	-15 34 02.95	0.13	2	71.830				18043
22420	+ 1	4723	8.6	G5	23 22 02.627	0.10	2	71.829	+ 2 20 05.77	0.04	2	71.829				18044
22421	-2	5951	7.8	G5	22 04.511	0.14	3	72.076	-2 00 57.55	0.41	3	72.076				18045
22422	-55	10019	8.6	K0	22 23.196	0.12	4	69.976	-54 53 15.58	0.17	4	69.976				18046
22423	-6	6204	8.9	K0	22 24.927	0.30	2	71.288	-5 29 10.65	0.85	2	71.288				18047
22424	-44	15232	8.70	K2	22 31.594	0.14	4	70.502	-44 07 57.28	0.17	4	70.502		32580		2792
22425	-56	10071	9.1	F0	23 22 41.827	0.16	4	70.687	-55 43 38.33	0.18	4	70.687				18048
22426	-40	15141	9.2	G5	22 44.617	0.13	4	71.180	-39 42 41.44	0.15	4	71.180				18049
22427	-30	19543	7.90	K2	22 47.021	0.11	4	69.224	-30 16 56.68	0.02	4	69.224		32584		18050
22428	-14	6467	8.3	K0	22 48.568	0.40	2	72.182	-14 17 26.17	0.03	2	72.182				18051
22429	-79	1233	9.2	G5	22 51.130	0.36	4	71.025	-79 16 00.77	0.21	4	71.025				20441
22429 SP					23 22 51.247	0.32	4	70.517	-79 16 00.96	0.41	4	70.517				20441
22430	+22	4833	4.57	G0	22 53.082	0.09	12	70.991	+23 07 43.98	0.13	11	71.040	881	32585	5143	30881
22431	-26	16626	8.8	K0	22 56.701	0.11	4	70.418	-26 12 37.77	0.07	4	70.418				18052
22432	-8	6111	9.1	K2	23 07.665	-	1	72.790	-8 06 15.94	-	1	72.790				18053
22433	-37	15246	9.1	K0	23 09.032	0.14	3	70.327	-36 49 25.77	0.00	2	70.187				18054
22434	-11	6071	8.0	M3	23 12.078	-	1	69.538	-11 25 50.25	-	1	69.538				18055
22435	-68	3570	9.2	F8	23 22.388	0.23	3	70.670	-68 18 31.06	0.47	3	70.670				20442
22436	-32	17523	9.1	K5	23 29.774	0.19	3	71.072	-32 08 52.14	0.15	3	71.072				18056
22437	-28	18199	6.70	K0	23 33.038	0.20	4	69.977	-27 41 59.40	0.17	4	69.977		32596		18058
22438	-71	2762	9.2	G5	23 39.086	0.36	2	70.224	-70 42 47.59	0.12	2	70.224				20443
22439	-74	2068	7.61	G5	23 45.599	0.26	4	71.401	-74 06 42.67	0.19	4	71.401		32601		20444
22440	-53	10461	5.54	F0	23 49.340	0.07	21	70.438	-52 59 52.71	0.06	21	70.438	883	32603	5145	30883
22441	-40	15149	8.5	K5	23 52.839	0.29	2	70.780	-40 17 46.84	0.51	2	70.780				2794
22442	-21	6421	8.50	K0	23 53.466	0.11	3	71.090	-21 27 55.10	0.13	3	71.090		32604		18061
22443	-41	15253	9.0	K2	24 02.005	0.15	3	71.232	-40 43 33.10	0.17	3	71.232				2795
22444	+ 1	4724	6.82	K0	23 10.289	0.12	2	71.823	+ 2 12 10.94	0.35	2	71.823		32614		18066
22445	-58	8072	7.9	K0	24 16.065	0.13	3	69.945	-57 35 17.03	0.11	3	69.945				18067
22446	+ 0	4998	4.94	A2p	24 22.204	0.03	37	70.634	+ 0 58 52.10	0.05	37	70.634	884	32620	5146	80884
22447	-23	17904	7.32	K0	24 23.210	0.08	4	70.133	-22 59 55.21	0.18	4	70.133		32622		18068
22448	-50	13976	6.34	B8	24 23.260	0.12	6	71.094	-50 25 57.23	0.17	6	71.094	3875	32621	5147	33875
22449	-59	7890	5.62	K0	23 24.735	0.12	6	71.344	-58 45 07.43	0.09	6	71.344	3876	32624	5148	33876
22450	-50	13978	8.0	K2	24 28.254	0.17	3	70.056	-50 33 14.56	0.14	3	70.056				2796
22451p	-86	418	7.60	K0	24 29.756	0.09	4	70.404	-85 59 05.71	0.20	4	70.404		32626		20445
22451 SP					24 29.587	0.11	4	70.181	-85 59 05.65	0.09	4	70.181		32626		20445
22452	-61	6746	8.1	F8	24 37.665	0.20	4	70.163	-61 27 45.16	0.13	4	70.163				18069
22453	-28	18204	8.4	K0	23 40.588	0.16	5	70.803	-28 19 14.23	0.11	5	70.803				18070
22454	-69	3322	9.4	G5	24 40.589	0.14	4	70.546	-69 09 49.15	0.15	4	70.546				20446
22455	-66	3774	8.8	K0	24 46.810	0.08	4	70.925	-65 50 25.45	0.14	4	70.925				20447
22456	-77	1575	9.2	G0	24 48.891	0.17	4	70.694	-77 14 26.95	0.03	4	70.694				20448
22456 SP					24 48.946	0.10	4	70.162	-77 14 26.36	0.18	4	70.162				20448
22457	-13	6407	7.50	M2	23 24 50.081	0.20	2	72.164	-13 12 19.10	0.16	2	72.164		32631		18073
22458	-25	16463	8.2	G5	24 53.575	0.17	4	70.314	-24 44 53.48	0.23	4	70.314				18075
22459	-30	19539	8.2	K2	25 05.471	0.02	4	70.969	-29 47 39.56	0.13	4	70.969				18076
22460	-36	15892	9.0	F5	25 06.829	0.13	4	70.420	-35 53 47.56	0.16	4	70.420				18077
22461	-67	3966	8.4	K0	25 09.422	0.14	3	69.520	-67 11 04.15	0.01	3	69.520				20449
22462	-27	16325	7.8	F8	23 25 18.104	0.07	4	70.926	-26 43 46.34	0.10	4	70.926				18078
22463	-36	15895	6.35	K2	25 19.952	0.15	7	71.503	-35 49 11.89	0.17	6	71.677	3878	32643	5151	33878
22464	+ 5	5173	4.45	G5	25 25.615	0.04	27	72.080	+ 6 06 13.90	0.09	27	72.080	1614	32647	5152	31614
22465	-31	19298	8.7	K0	25 27.250	0.05	3	69.397	-31 06 43.86	0.10	3	69.397				18079
22466	-12	6496	6.48	G0	25 29.237	0.04	2	71.735	-11 43 30.40	0.23	2	71.735		32648	5153	18080

22409 A 16727, SDS, 6.6m-10.3m, 1.7, 233°.

22451 10.9m, 3.0, 64°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R	A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*	
22467	-66°	3776	9.0	K0	23	25	43.094	0.35	4	69.733	-66° 21'	40.27	0.39	4	69.733				20450	
22468	-39	15037	7.65	G5	25	43.515	0.22	4	70.192	-38 55	16.61	0.18	4	70.192		32651			18081	
22469	-38	15502	8.7	G5	25	45.354	0.20	3	70.378	-38 01	56.84	0.14	3	70.378					18082	
22470	-26	16654	6.89	A3	25	46.939	0.08	6	70.551	-25 41	45.70	0.08	6	70.551		3879	32654	5155	33879	
22471	-35	15804	8.5	K2	25	49.588	0.09	4	70.847	-35 31	53.08	0.15	4	70.847					18083	
22472	-3	5644	8.3	K5	23	25	52.832	0.22	2	70.524	-2 55	43.82	0.26	2	70.524				18084	
22473	-82	896	9.0	K0	26	05.255	0.21	4	70.718	-82 12	04.05	0.06	4	70.718					20451	
22473	SP				26	04.901	0.21	4	70.264	-82 12	03.94	0.12	4	70.264					20451	
22474	-14	6475	9.0	F5	26	08.168	0.15	2	71.244	-14 18	39.61	0.05	2	71.244					18085	
22475	-63	4891	5.74	A0p	26	08.318	0.16	6	69.989	-63 23	10.57	0.16	6	69.989		3880	32657	5156	33880	
22476	-47	14589	8.5	G5	23	26	20.836	0.07	4	70.552	-46 59	55.61	0.36	4	70.552				2797	
22477	-8	6118	8.7	G5	26	21.756	0.15	2	71.239	-7 40	39.69	0.40	2	71.239					18086	
22478	-51	13578	8.5	F8	26	22.596	0.07	4	70.395	-51 17	45.86	0.14	4	70.395					2798	
22479	-10	6120	6.46	K0	26	25.447	0.27	2	71.220	-9 32	29.16	0.14	2	71.220			32662		18087	
22480	-2	5971	8.7	K2	26	28.105	0.29	2	71.226	-1 44	45.23	0.43	2	71.226					18088	
22481	+15	4830	6.98	A2	23	26	31.109	0.09	10	71.407	+15 44	12.75	0.08	10	71.407		1615	32665	5157	31615
22482	-23	17919	8.9	F8	26	33.280	0.14	3	69.016	-23 31	11.47	0.09	3	69.016					18089	
22483	-27	16329	8.6	F0	26	37.091	0.28	3	69.041	-27 22	12.56	0.18	3	69.041					18090	
22484	+11	5009	4.67	K0	26	37.498	0.06	13	71.250	+12 29	04.96	0.08	13	71.250		885	32667	5158	30885	
22485	-49	14161	8.0	A0	26	41.380	0.22	4	70.601	-48 40	33.00	0.08	4	70.601					2799	
22486	-40	15167	8.4	K0	23	26	42.882	0.13	5	70.763	-39 41	15.66	0.14	5	70.763				18091	
22487	-72	2762	9.0	K0	26	47.638	0.08	4	68.959	-71 56	20.27	0.13	4	68.959					20452	
22488	-4	5890	8.5	A0	26	47.664	0.46	2	71.205	-3 52	15.87	0.06	2	71.205					18092	
22489	-2	5973	6.59	K0	26	52.925	0.13	2	71.188	-2 04	00.13	0.17	2	71.188			32671		18093	
22490	-40	15172	8.7	G5	26	54.438	0.09	4	70.502	-40 17	37.87	0.06	4	70.502					2800	
22491	-1	4443	7.10	G0	23	26	56.383	0.15	2	70.699	-1 18	40.87	0.13	2	70.699			32672	5159	18094
22492	-5	5999	6.40	K2	26	57.205	0.11	6	70.029	-4 48	23.56	0.16	6	70.029		3881	32673		33881	
22493	-46	14673	8.01	F5	27	06.728	0.13	4	70.647	-46 10	09.05	0.20	4	70.647			32677		2801	
22494	-19	6464	8.8	K0	27	08.802	0.04	2	71.207	-18 47	30.83	0.02	2	71.207					18095	
22495	+0	5008	8.4	G5	27	22.253	0.03	2	71.209	+0 53	16.68	0.05	2	71.209					18096	
22496	-7	6029	8.7	K0	23	27	23.423	0.09	2	71.198	-6 32	22.68	0.42	2	71.198					18097
22497	-20	6606	8.7	K5	27	28.049	0.15	4	69.091	-20 26	49.63	0.11	4	69.091					18098	
22498	-30	19576	8.8	G5	27	33.952	0.11	4	68.997	-30 22	47.88	0.02	4	68.997					18099	
22499	-36	15914	8.9	K2	27	35.058	0.15	4	70.943	-35 36	47.07	0.11	4	70.943					18100	
22500	-48	14523	8.0	K2	27	36.430	0.09	4	70.912	-48 31	06.00	0.15	4	70.912					2802	
22501	+4	5016	7.32	K0	23	27	40.511	0.15	2	70.823	+4 44	12.12	0.06	2	70.823			32682		18101
22502	-39	15054	8.4	G0	27	58.296	0.04	4	70.628	-38 36	13.54	0.20	4	70.628					18102	
22503	-24	17702	7.50	G0	28	02.199	0.11	4	69.971	-24 28	20.03	0.05	4	69.971			32689		18103	
22504	-62	6422	8.2	K0	28	03.070	0.12	4	69.485	-62 29	08.57	0.09	4	69.485					18104	
22505*	-58	8076	8.7	G0	28	08.593	0.24	4	68.928	-58 23	17.73	0.17	4	68.928					18105	
22506	-35	15821	8.07	K0	23	28	14.519	0.08	4	70.395	-35 22	57.13	0.16	4	70.395			32693		18106
22507	-16	6303	8.0	F8	28	17.855	0.19	2	70.814	-16 15	28.95	0.02	2	70.814					18107	
22508	-5	6003	8.0	K0	28	22.859	0.01	2	70.823	-5 20	11.64	0.24	2	70.823					18108	
22509	-33	16575	8.9	F8	28	26.400	0.19	4	70.442	-33 33	52.30	0.26	4	70.442					18109	
22510	-7	6036	6.39	K0	28	26.428	0.00	2	71.175	-6 33	49.46	0.28	2	71.175			32695		18110	
22511	-81	1036	7.39	K0	23	28	29.299	0.17	4	69.855	-81 06	15.40	0.15	4	69.855			32696		20453
22511	SP				28	29.353	0.12	4	69.717	-81 06	14.92	0.06	4	69.717			32696		20453	
22512*	-54	10301	9.2	G5	28	30.818	0.09	4	68.962	-54 16	15.96	0.20	4	68.962					18111	
22513*	-42	16363	8.37	F8	28	44.084	0.11	4	70.681	-42 26	08.28	0.19	4	70.681			32701		2803	
22514	-45	15055	5.93	K0	28	44.348	0.11	6	69.360	-45 07	10.21	0.11	6	69.360		3883	32702	5163	33883	
22515	-5	6005	8.9	A3	23	28	50.530	0.02	2	70.690	-4 31	38.73	0.30	2	70.690					18112
22516	-36	15924	8.34	G5	28	55.157	0.13	4	70.603	-36 33	59.50	0.12	4	70.603			32706		18113	
22517	+27	4566	6.68	K0	29	01.029	0.21	6	69.979	+28 23	24.90	0.18	6	69.979		3884	32710	5164	33884	
22518	-22	6141	6.24	F0	29	04.873	0.11	6	69.118	-21 38	43.53	0.21	6	69.118		3885	32714		33885	
22519	-15	6444	8.1	K2	29	08.994	0.10	2	71.196	-15 04	57.97	0.02	2	71.196					18114	
22520	-42	16367	6.75	K0	23	29	10.177	0.15	4	70.659	-42 01	42.87	0.07	4	70.659			32715		2804
22521	-48	14531	8.5	K2	29	10.259	0.14	4	70.471	-48 14	50.28	0.05	4	70.471					2805	
22522	-56	10090	9.21	K7	29	13.317	0.16	4	69.002	-56 31	32.81	0.11	4	69.002			32718		18115	
22523	-11	6090	8.7	K5	29	14.255	0.15	2	71.191	-11 08	26.69	0.29	2	71.191					18116	
22524	-12	6508	7.88	K0	29	15.406	0.23	2	70.747	-12 13	26.93	0.16	2	70.747			32720		18117	
22525	-59	7897	7.87	K0	23	29	16.930	0.26	5	70.546	-59 16	47.20	0.14	5	70.546			32721		18118
22526	-3	5651	8.5	F8	29	34.354	0.14	2	71.228	-3 18	15.98	0.16	2	71.228					18119	
22527	-64	4354	7.68	K0	29	37.217	0.13	4	69.271	-63 55	51.54	0.11	4	69.271			32730		20454	
22528	-44	15273	8.5	K2	29	39.053	0.12	4	71.043	-43 53	21.33	0.24	4	71.043					2806	
22529	-14	6485	8.8	K0	29	47.121	0.14	2	71.300	-13 34	15.19	0.26	2	71.300					18120	
22530	-11	6098	6.73	G5	23	29	50.452	0.11	4	71.102	-11 16	29.83	0.05	4	71.102		3886	32735		18121
22531	-32	17558	8.7	K2	29	50.498	0.23	4	70.416	-32 30	47.63	0.12	4	70.416					18122	
22532*	-46	14689	8.5	F2	29	50.806	0.09	4	71.431	-45 36	28.77	0.18	4	71.431					2807	
22533	+2	4676	8.8	F5	29	55.033	0.23	2	71.717	+2 45	50.36	0.42	2	71.717					18123	
22534	-78	1473	5.78	K0	30	08.502	0.09	6	70.314	-77 39	42.11	0.13	6	70.314		3887	32742	5167	33887	
22534	SP				23	30	08.387	0.24	6	70.135	-77 39	42.20	0.24	6	70.135		3887	32742	5167	53887
22535	-22	6146	8.2	G5	30	13.531	0.15	4	68.969	-21 57	50.03	0.12	4	68.969					18124	
22536	-38	15527	4.46	B9	30	17.830	0.03	83	71.575											

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m _v	Sp	R A	1950.0	ε _α	N _α	Epoch _α	Decl	1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
22538	- 9	6210	8.4	K0	23	30 20.894	0.10	2	71.748	- 9 26' 08.94	0.23	2	71.748					18125
22539	+ 2	4680	8.2	M0		30 21.192	0.30	2	71.237	+ 3 06' 19.44	0.09	2	71.237					18126
22540	- 0	4523	8.9	K0		30 23.206	0.32	2	71.754	- 0 05' 44.91	0.06	2	71.754					18127
22541	-63	4901	8.9	G5		30 28.260	0.16	4	69.267	-63 33' 42.81	0.20	4	69.267					18128
22542	-20	6613	7.8	F8		30 28.618	0.06	4	70.000	-20 21' 53.43	0.12	4	70.000					18129
22543	-41	15271	8.67	K0	23	30 30.978	0.13	4	70.732	-41 07' 18.03	0.09	4	70.732		32747			2808
22544	-29	18741	8.6	F5		30 36.449	0.09	3	69.986	-28 57' 10.87	0.05	3	69.986					18130
22545	- 7	6046	8.2	F8		30 37.099	0.07	2	71.252	- 6 40' 37.25	0.17	2	71.252					18131
22546	-60	7667	8.78	G5		30 43.668	0.25	4	69.441	-60 11' 44.03	0.21	4	69.441		32753			18132
22547	-51	13599	8.7	K0		30 45.434	0.15	4	69.679	-51 19' 01.61	0.22	4	69.679					2809
22548	-31	19333	7.22	K0	23	30 47.047	0.13	4	69.207	-31 33' 56.98	0.11	4	69.207		32754			18133
22549	+ 3	4870	7.5	K5		30 49.961	0.21	2	71.752	+ 4 21' 47.38	0.16	2	71.752					18134
22550	-76	1592	9.2	G5		30 50.802	0.11	4	69.927	-75 52' 28.69	0.20	4	69.927					20456
22550	SP					30 50.787	0.24	4	70.153	-75 52' 28.73	0.15	4	70.153					20456
22551	-57	10294	8.7	G5		30 51.504	0.08	4	69.956	-57 04' 47.33	0.21	4	69.956					18135
22552	- 5	6011	7.05	F5	23	30 54.163	0.11	2	71.747	- 4 40' 39.55	0.18	2	71.747		32756			18136
22553	-19	6472	8.2	M0		30 54.224	0.24	2	71.770	-19 25' 18.14	0.07	2	71.770					18137
22554	-72	2766	9.3	F0		30 54.531	0.18	4	70.181	-72 22' 18.52	0.14	4	70.181					20457
22555	-54	10311	9.2	G5		30 54.934	0.25	3	69.839	-53 56' 02.09	0.32	3	69.839					18138
22556	-52	12169	8.52	G5		30 56.485	0.09	4	69.945	-52 00' 13.47	0.13	4	69.945		32757			18139
22557	+21	4952	5.51	M3	23	30 57.650	0.16	6	70.439	+22 13' 21.47	0.21	6	70.439	3889	32759	5172		33889
22558	-44	15278	8.2	G5		31 05.505	0.10	4	70.629	-44 14' 52.04	0.14	4	70.629					2810
22559	- 3	5661	7.7	A2		31 07.398	0.23	2	71.778	- 2 31' 14.56	0.09	2	71.778					18140
22560	-46	14693	8.5	G0		31 08.131	0.12	4	71.188	-45 55' 31.62	0.12	4	71.188					2811
22561	-35	15832	8.4	F2		31 12.486	0.14	4	71.197	-34 47' 18.64	0.25	4	71.197					18141
22562	-26	16694	8.4	G0	23	31 15.061	0.13	4	69.838	-26 02' 58.89	0.25	4	69.838					18142
22563	-34	16081	8.1	K2		31 15.171	0.15	4	70.651	-33 56' 22.11	0.47	4	70.651					18143
22564	-17	6774	8.6	A3		31 16.181	0.06	2	71.586	-16 35' 22.84	0.46	2	71.586					18144
22565	-23	17951	8.2	K5		31 20.818	0.21	4	69.506	-23 13' 06.81	0.11	4	69.506					18145
22566	-25	16517	7.48	F8		31 22.656	0.28	4	69.951	-25 08' 10.67	0.18	4	69.951		32768			18146
22567	-25	16519	8.8	F8	23	31 28.761	0.14	4	70.181	-25 22' 18.50	0.08	4	70.181					18147
22568	-51	13602	9.3	K0		31 31.199	0.09	4	70.735	-50 49' 47.20	0.14	4	70.735					2812
22569	-18	6337	8.8	K0		31 32.177	0.06	2	72.189	-18 10' 07.42	0.48	2	72.189					18148
22570	- 1	4456	8.8	K2		31 33.427	0.02	2	72.187	- 0 42' 00.81	0.22	2	72.187					18149
22571	- 2	5986	5.98	A2		31 34.840	0.09	6	69.414	- 1 31' 26.22	0.08	6	69.414	3890	32774	5173		33890
22572	-61	6756	7.8	K0	23	31 44.944	0.18	4	69.908	-61 08' 42.14	0.11	4	69.908					18150
22573	-47	14620	8.4	G5		31 56.726	0.12	5	70.852	-46 57' 24.32	0.10	5	70.852					2813
22574	-38	15545	8.6	G5		31 58.860	0.07	4	70.739	-38 32' 38.19	0.10	4	70.739					18151
22575	-55	10046	8.8	K5		32 06.897	0.07	5	70.844	-55 27' 10.78	0.12	5	70.844					18152
22576	-28	18250	8.2	F8		32 12.934	0.25	4	70.299	-27 59' 21.53	0.19	4	70.299					18153
22577	-35	15843	7.11	K0	23	32 15.044	0.09	4	71.335	-35 21' 40.73	0.21	4	71.335		32782			18154
22578	-57	10297	6.88	F2		32 16.693	0.14	6	70.090	-57 06' 06.94	0.12	6	70.090	3892	32783			33892
22579	-56	10100	8.15	K0		32 19.679	0.09	4	69.715	-56 17' 05.69	0.11	4	69.715					18155
22580	-43	15420	4.80	A2p		32 23.603	0.04	29	71.383	-42 53' 30.17	0.06	29	71.383	1617	32787	5176		31617
22581	- 8	6141	7.42	K5		32 29.362	0.18	2	71.246	- 7 57' 14.22	0.09	2	71.246					18156
22582	- 4	5912	7.45	F2	23	32 40.288	0.32	2	70.814	- 4 07' 49.98	0.18	2	70.814		32792			18157
22583	-17	6779	7.66	K0		32 51.980	0.19	2	71.731	-16 51' 35.92	0.12	2	71.731			5178		18158
22584	+ 0	5018	6.65	K0		32 55.053	0.04	2	71.744	+ 1 02' 11.89	0.03	2	71.744		32798			18159
22585	- 7	6052	8.8	K0		32 56.321	0.07	2	71.766	- 7 25' 42.45	0.19	2	71.766					18160
22586	- 8	6142	6.51	K0		32 57.309	0.02	103	71.026	- 7 44' 28.38	0.03	103	71.026	888	32799	5181		80688
22587	-16	6317	7.34	K0	23	33 06.061	0.00	2	71.254	-15 34' 31.14	0.35	2	71.254		32806			18161
22588	-39	15084	7.63	K0		33 08.494	0.13	4	70.310	-39 13' 49.54	0.13	4	70.310		32807			18162
22589	+ 1	4741	8.6	K2		33 12.737	0.11	2	71.765	+ 1 47' 52.98	0.29	2	71.765					18163
22590	-44	15290	8.7	G5		33 20.286	0.21	4	70.610	-43 43' 28.50	0.08	4	70.610					2814
22591	+ 1	4742	8.4	A0		33 21.493	0.04	2	71.307	+ 2 10' 07.86	0.38	2	71.307					18164
22592	-11	6111	7.9	G5	23	33 22.234	0.20	2	71.336	-10 57' 51.62	-	1	70.871					18165
22593*	-33	16612	8.8	G0		33 24.978	0.08	4	70.638	-32 54' 00.38	0.19	4	70.638					18166
22594	+23	4769	6.60	M0		33 25.514	0.08	6	70.423	+24 17' 02.86	0.21	6	70.423	3894	32814			33894
22595	-41	15280	8.7	K5		33 25.945	0.13	3	70.426	-41 11' 23.90	0.20	3	70.426					2815
22596	-47	14632	8.3	K0		33 29.648	0.12	4	70.923	-46 40' 05.14	0.18	4	70.923					2816
22597	-27	16377	6.54	A2	23	33 32.194	0.14	4	69.894	-27 09' 10.91	0.14	4	69.894		32815			18167
22598	-48	14549	8.2	K2		33 35.880	0.25	4	71.202	-47 44' 34.08	0.12	4	71.202					2817
22599*	- 7	6055	7.9	A3		33 42.857	0.09	2	70.755	- 7 23' 37.87	0.38	2	70.755					18168
22600	-40	15197	9.5	K5		33 47.606	0.09	4	71.229	-40 26' 23.50	0.28	4	71.229					2818
22601	+ 1	4744	5.65	F5		33 49.981	0.05	6	70.008	+ 1 49' 30.04	0.17	6	70.008	3895	32818	5183		33895
22602	- 3	5669	8.0	F8	23	34 11.297	0.12	2	71.675	- 3 14' 17.28	0.01	2	71.675					18169
22603	-78	1474	8.8	G5		34 16.747	0.09	3	69.707	-78 25' 53.00	0.12	3	69.707					20458
22603	SP					34 16.774	0.22	4	70.262	-78 25' 52.21	0.27	4	70.262					20458
22604	-35	15862	8.3	K0		34 17.354	0.03	4	70.664	-34 37' 40.34	0.12	4	70.664					18170
22605	-70	3013	8.5	K0		34 24.447	0.10	3	69.878	-70 18' 54.96	0.17	3	69.878					20459
22606	-18	6345	8.3	F2	23	34 25.845	0.02	2	72.215	-17 50' 18.98	0.19	2	72.215					18171
22607	-58	8087	7.5	K0		34 37.305	0.04	4	70.627	-58 26' 47.72	0.13	4	70.627					18172
22608	-52	12184	8.12	K0		34 41.167	0.11	4	70.616	-52 00' 34.75	0.23	4	70.616		32826			18173
22609	-14	6506	8.0	K0		34 45.641	0.08	2	71.709	-13 36' 53.65	0.07	2	71.709					18174
22610	-54	10324	9.0	K2		34 52.044	0.34	3	70.807	-54 27' 51.11	0.20	3	70.807					18175

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
22611	-30 19622	9.0	K2	23 34 52.388	0.04	3	69.339	-30 21 47.01	0.09	3	69.339				18176
22612	-62 6433	8.8	K0	34 55.314	0.19	4	70.909	-62 00 26.59	0.13	4	70.909				18177
22613	-38 15567	9.2	F5	34 58.642	0.08	4	70.438	-37 56 43.81	0.12	4	70.438				18178
22614	-59 7907	8.9	G5	35 02.117	0.09	3	69.764	-59 02 45.27	0.32	3	69.764				18179
22615	-10 6145	8.4	K2	35 06.869	0.09	2	71.763	-10 15 06.51	0.08	2	71.763				18180
22616	-60 7670	8.0	K0	23 35 07.507	0.16	4	70.720	-60 03 08.25	0.15	4	70.720				18181
22617	-46 14721	8.39	M3	35 09.259	0.09	4	70.593	-45 50 44.52	0.11	4	70.593		32834		2819
22618	-46 14720	4.86	A2	35 10.026	0.03	81	71.045	-45 46 09.29	0.03	81	71.045	889	32836	5189	30889
22619	-67 3971	9.1	F5	35 10.589	0.26	4	71.279	-67 19 32.37	0.20	4	71.279				20460
22620	-25 16553	7.74	F2	35 14.160	0.17	4	68.973	-25 09 18.04	0.21	4	68.973		32837	5190	18182
22621	+ 2 4690	7.64	F5	23 35 15.642	0.03	2	71.751	+ 3 05 36.59	0.26	2	71.751		32839	5191	18183
22622	-36 15971	8.6	K0	35 20.564	0.21	4	70.637	-36 09 19.02	0.14	4	70.637				18184
22623	-42 16409	8.07	K0	35 22.865	0.08	4	70.500	-41 50 29.93	0.08	4	70.500		32841		2820
22624	-31 19367	9.0	G5	35 22.902	0.11	4	69.258	-30 50 07.43	0.15	4	69.258				18185
22625	+17 4952	5.42	A0	35 25.188	0.07	6	69.816	+18 07 25.15	0.16	6	69.816	3896	32842		33896
22626	-29 18779	8.3	K2	23 35 25.830	0.15	4	69.467	-29 02 14.05	0.11	4	69.467				18186
22627	-15 6464	6.66	K0	35 27.253	0.07	2	71.214	-15 22 16.45	0.09	2	71.214		32843	5192	18187
22628	- 2 6000	8.1	A2	35 32.477	0.21	2	72.076	- 1 36 45.08	0.25	2	72.076				18188
22629	- 4 5917	8.5	F5	35 36.315	0.34	2	72.202	- 3 42 10.60	0.09	2	72.202				18189
22630	- 9 6224	6.84	G5	35 37.553	0.19	2	72.250	- 8 54 16.10	0.67	2	72.250		32848		18190
22631	- 1 4466	8.9	G5	23 35 41.974	0.01	2	72.231	- 1 08 44.66	0.33	2	72.231				18191
22632	-39 15100	8.2	K0	35 45.802	0.16	4	70.436	-38 46 00.32	0.12	4	70.436				18192
22633	-39 15099	9.0	K5	35 46.702	0.15	4	70.638	-39 16 46.01	0.14	4	70.638				18193
22634	-32 17605	8.6	G0	35 48.646	0.19	4	69.919	-32 03 23.21	0.11	4	69.919				18194
22635	-22 6168	8.5	K0	35 51.496	0.23	4	69.789	-21 56 58.37	0.04	4	69.789				18195
22636	-64 4366	7.6	K0	23 35 52.268	0.10	4	69.362	-64 18 48.76	0.15	4	69.362				20461
22637	+ 1 4751	8.4	F8	35 53.605	0.01	2	71.705	+ 1 58 25.09	0.30	2	71.705				18196
22638	-37 15324	9.1	G5	35 58.834	0.23	4	70.692	-36 55 23.88	0.16	4	70.692				18197
22639	-45 15093	8.0	K0	36 03.562	0.19	4	70.702	-45 31 43.59	0.11	4	70.702				2821
22640	-21 6453	7.95	G0	36 05.309	0.18	4	69.960	-21 08 39.89	0.16	4	69.960		32856		18198
22641	-24 17784	8.5	G0	23 36 13.760	0.09	4	70.189	-23 57 19.21	0.16	4	70.189				18199
22642	-63 4916	8.9	K0	36 19.579	0.10	4	69.996	-63 19 22.94	0.17	4	69.996				18200
22643	-18 6353	8.6	F2	36 43.754	0.44	2	71.348	-18 04 05.76	0.16	2	71.348				18201
22644	-34 16118	8.1	K0	36 45.842	0.13	4	70.379	-33 46 13.61	0.14	4	70.379				18202
22645	-69 3329	8.0	G5	36 48.469	0.29	4	70.107	-69 28 20.69	0.17	4	70.107				20462
22646	- 2 6007	8.9	K5	23 36 49.333	0.04	2	71.711	- 2 25 54.09	0.12	2	71.711				18203
22647	-19 6485	8.9	K2	36 53.715	0.16	2	72.048	-19 21 08.73	0.00	2	72.048				18204
22648	-51 13628	8.26	K0	37 01.874	0.06	4	69.715	-51 01 54.60	0.11	4	69.715		32870		2822
22649	-66 3788	9.1	K0	37 04.467	0.10	4	69.685	-66 34 14.48	0.19	4	69.685				20463
22650	-23 17984	7.16	A0	37 05.089	0.13	4	70.001	-22 48 37.53	0.20	4	70.001		32871		18205
22651	- 6 6256	7.8	K2	23 37 16.198	0.13	2	71.142	- 5 49 25.89	0.04	2	71.142				18206
22652	+ 4 5035	4.28	F8	37 23.153	0.03	68	71.402	+ 5 21 09.26	0.04	68	71.402	892	32879	5199	30892
22653	-43 15456	8.3	K0	37 43.283	0.07	4	69.978	-43 32 16.34	0.20	4	69.978				2823
22654	+ 4 5036	8.2	K5	37 44.822	0.01	2	70.763	+ 4 31 45.03	0.04	2	70.763		32884		18207
22655	-49 14221	9.1	G5	37 48.743	0.15	4	70.914	-49 28 21.92	0.17	4	70.914				2824
22656	-32 17621	5.33	K0	23 38 00.788	0.03	73	71.053	-32 21 00.02	0.04	73	71.053	1618	32888	5201	31618
22657	-65 4156	8.9	A0	38 00.789	0.18	4	68.925	-65 33 13.77	0.17	4	68.925				20464
22658	-19 6489	8.03	G0	38 01.379	0.12	2	70.534	-19 15 57.14	0.25	2	70.534		32889		18208
22659	- 0 4547	7.8	K0	38 06.649	0.25	2	71.217	+ 0 08 20.24	0.19	2	71.217				18209
22660	-35 15887	9.1	K0	38 08.382	0.13	4	70.299	-34 38 41.63	0.33	4	70.299				18210
22661	- 8 6166	7.08	F8	23 38 13.992	0.17	2	71.195	- 8 11 28.59	0.03	2	71.195		32893	5203	18211
22662	+ 2 4701	8.9	A0	38 17.492	0.03	2	71.217	+ 3 20 59.65	0.34	2	71.217				18212
22663	-12 6534	8.7	K0	38 24.532	0.38	2	72.175	-11 44 52.11	0.03	2	72.175				18213
22664	-24 17796	6.68	K5	38 30.543	0.08	4	69.939	-24 26 15.87	0.12	4	69.939		32897		18214
22665	- 7 6070	8.5	F0	38 35.650	0.18	2	71.767	- 6 45 18.73	0.16	2	71.767				18215
22666	- 3 5688	8.7	K0	23 38 39.367	0.23	2	72.292	- 3 08 11.61	0.12	2	72.292				18216
22667	-74 2088	8.9	K0	38 39.544	0.16	4	69.313	-74 03 28.93	0.24	4	69.313				20465
22668	-14 6523	8.8	F0	38 43.224	--	1	72.806	-13 45 07.63	--	1	72.806				18217
22669	- 5 6033	8.7	K2	38 43.643	0.04	2	72.314	- 4 42 02.38	0.01	2	72.314				18218
22670	+ 4 5039	8.5	K2	38 44.263	--	1	72.507	+ 4 56 28.23	--	1	72.507				18219
22671	+ 1 4758	7.9	K2	23 38 44.581	0.06	2	71.826	+ 2 11 25.30	0.32	2	71.826				18220
22672	-12 6539	8.8	G5	38 53.157	--	1	72.575	-12 14 07.95	--	1	72.575				18221
22673	-26 16744	8.5	G0	38 53.409	0.21	4	70.466	-25 56 51.92	0.05	4	70.466				18222
22674	-51 13645	7.8	K0	38 57.663	0.22	4	69.936	-50 42 05.13	0.39	4	69.936				2825
22675	-38 15591	8.0	G5	38 58.527	0.04	4	71.163	-37 42 38.67	0.16	4	71.163				18223
22676	-55 10070	9.0	K2	23 39 00.774	0.13	4	70.917	-55 31 30.67	0.21	4	70.917				18224
22677	-35 15894	8.9	K2	39 08.701	0.16	4	71.164	-35 29 40.73	0.11	4	71.164				18225
22678	-20 6635	7.9	K2	39 09.525	0.23	4	70.156	-20 26 52.95	0.18	4	70.156				18226
22679	-70 3015	7.8	G5	39 13.658	0.16	4	69.705	-69 42 51.95	0.17	4	69.705				20466
22680	-49 14228	8.5	K0	39 13.948	0.15	4	71.006	-48 55 11.95	0.22	4	71.006				2826
22681	-36 15990	9.3	G5	23 39 16.213	0.13	4	71.210	-36 15 17.07	0.26	4	71.210				18227
22682	-16 6341	8.6	K0	39 22.831	0.07	2	71.194	-15 44 26.55	0.33	2	71.194				18228
22683	+ 4 5040	8.8	K5	39 22.928	0.04	2	71.177	+ 4 41 17.04	0.25	2	71.177				18229
22684	-30 19659	7.8	K2	39 24.936	0.05	4	69.948	-29 54 05.39	0.16	4	69.948				18230
22685	-53 10509	8.6	K0	39 25.413	0.13	4	69.529	-53 19 50.00	0.08	4	69.529				18231

22634 SDS, 9.1m-9.8m, 0°3, 123°.
22645 SDS, 10.0m, 5°1, 349°.

22672 10.1m-10.3m, 0°5, 83°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
22686	-57	10327	8.00	K0	23 39 27.677	0.16	4	70.925	-56 39 26.89	0.16	4	70.925	1620	32915	5204	18232
22687	+0	5037	4.61	A5	39 29.436	0.04	25	71.847	+1 30 13.86	0.06	25	71.847		32917		31620
22688	-33	16660	9.0	G5	39 31.949	0.19	4	70.534	-32 55 10.37	0.19	4	70.534				18233
22689	-28	18297	8.0	G5	39 39.668	0.08	4	69.521	-27 54 57.59	0.11	4	69.521				18234
22690	-51	13649	9.2	K0	39 47.574	0.14	4	69.811	-50 58 36.48	0.12	4	69.811				2827
22691	-2	6021	8.3	F2	23 39 47.786	0.04	2	71.221	-1 46 42.86	0.14	2	71.221				18235
22692	-15	6476	4.62	A0	40 07.958	0.03	74	70.937	-14 49 18.69	0.03	73	70.979	894	32931	5205	80894
22693	+15	4872	6.51	K0	40 11.489	0.09	6	70.958	+16 03 29.33	0.07	6	70.958	3901	32932		33901
22694	-12	6542	7.32	K0	40 13.001	0.04	2	71.243	-11 36 21.30	0.02	2	71.243		32933		18236
22695	-70	3016	9.1	K2	40 17.736	0.14	4	69.300	-70 19 18.85	0.20	4	69.300				20467
22696	-0	4558	8.9	G0	23 40 22.712	0.25	2	72.028	-0 02 16.57	0.10	2	72.028				18237
22697	-29	18811	7.16	K2	40 25.491	0.13	4	69.637	-29 19 17.34	0.21	4	69.637		32934		18238
22698	-71	2770	7.49	G5	40 27.431	0.13	4	69.264	-71 05 46.36	0.29	4	69.264		32936		20468
22699	-39	15125	9.2	G0	40 32.064	0.11	4	69.941	-38 58 54.61	0.10	4	69.941				18239
22700	+0	5038	9.0	K0	40 40.713	0.11	2	72.073	+0 50 08.25	0.41	2	72.073				18240
22701	-21	6467	8.4	K0	23 40 42.585	0.14	4	69.938	-21 22 03.63	0.01	4	69.938				18241
22702	-83	756	7.65	G0	40 45.743	0.19	4	69.714	-82 47 07.32	0.09	4	69.714		32944		20469
22702	SP				40 45.716	0.10	4	69.205	-82 47 07.30	0.33	4	69.205		32944		20469
22703	+9	5268	5.39	M0	40 49.518	0.09	6	70.832	+10 03 14.29	0.13	6	70.832	3902	32945		33902
22704	-10	6160	8.8	G0	41 01.838	0.20	2	70.539	-9 57 05.39	0.04	2	70.539				18242
22705	-78	1481	8.4	G5	23 41 01.900	0.20	4	69.950	-78 23 50.88	0.17	4	69.950				20470
22705	SP				41 01.921	0.16	4	69.707	-78 23 51.06	0.39	4	69.707				20470
22706	-32	17641	9.2	K5	41 05.562	0.14	3	70.361	-31 52 19.68	0.18	3	70.361				18243
22707	-62	6437	7.4	M0	41 06.203	0.07	4	68.884	-62 00 26.59	0.10	4	68.884				18244
22708	-64	4374	8.6	G5	41 13.772	0.20	4	69.466	-64 15 24.89	0.10	4	69.466				18245
22709	-45	15114	6.26	G5	23 41 21.540	0.11	6	70.185	-45 21 38.96	0.14	6	70.185	3903	32951		33903
22710	-25	16612	8.2	F2	41 22.014	0.23	4	71.216	-25 02 32.31	0.34	4	71.216				18246
22711	-9	6244	8.9	K0	41 27.368	0.16	2	72.024	-8 32 57.65	0.30	2	72.024				18247
22712	-65	4159	5.66	K5	41 27.660	0.11	6	70.487	-64 40 57.03	0.21	6	70.487	3904	32953	5206	33904
22713	-41	15301	7.55	K2	41 33.097	0.21	4	70.351	-40 57 48.91	0.06	4	70.351		32955		2828
22714	-37	15358	9.2	K	23 41 35.553	0.19	4	70.425	-37 23 35.66	0.16	4	70.425				18248
22715	+1	4764	8.6	K0	41 35.870	0.12	2	71.670	+1 52 06.23	0.13	2	71.670				18249
22716	-71	2771	6.04	G5	41 36.075	0.11	6	70.728	-70 46 06.10	0.11	6	70.728	3905	32957	5207	33905
22716	SP				41 36.093	0.11	6	69.762	-70 46 07.20	0.32	6	69.762	3905	32957	5207	33905
22717	-19	6500	5.26	B8	41 36.595	0.03	70	71.522	-18 33 16.32	0.03	70	71.522	1621	32958	5208	31621
22718	-43	15479	7.5	A0	23 41 37.200	0.13	4	70.037	-43 18 08.57	0.18	4	70.037				2829
22719	-55	10080	7.38	M0	41 38.418	0.06	4	69.019	-54 42 49.51	0.08	4	69.019		32959		18250
22720	-79	1239	5.68	K0	41 41.307	0.13	6	70.190	-79 04 09.16	0.14	6	70.190	3906	32960	5209	33906
22720	SP				41 41.484	0.14	6	68.737	-79 04 09.10	0.16	6	68.737	3906	32960	5209	53906
22721	-61	6763	8.6	K2	41 46.410	0.16	4	69.009	-61 25 03.54	0.15	4	69.009				18251
22722	-27	16431	8.4	F2	23 41 57.764	0.17	4	70.272	-26 45 12.86	0.09	4	70.272				18252
22723	-3	5697	7.24	F8	41 58.459	0.07	2	71.198	-3 27 10.09	0.57	2	71.198		32964	5210	18253
22724	-40	15231	9.0	P5	42 01.962	0.15	4	70.461	-39 47 11.52	0.10	4	70.461				18254
22725	-9	6248	8.04	A0	42 07.514	0.17	2	71.201	-8 44 25.39	0.16	2	71.201		32966		18255
22726	-33	16679	9.0	K0	42 11.686	0.17	4	70.893	-33 09 30.98	0.28	4	70.893				18256
22727	-23	18027	8.3	K0	23 42 12.701	0.12	5	69.825	-23 27 21.76	0.06	5	69.825				18257
22728	-7	6078	8.7	G5	42 13.031	0.18	2	71.203	-7 12 51.17	0.23	2	71.203				18258
22729	-48	14594	8.5	G5	42 15.345	0.13	4	70.920	-47 37 19.18	0.11	4	70.920				2830
22730	-48	14595	8.2	K0	42 19.599	0.06	4	70.599	-48 10 50.77	0.12	4	70.599				2831
22731	-59	7916	9.0	G5	42 19.779	0.14	4	70.640	-59 27 10.57	0.18	4	70.640				18259
22732	-1	4485	7.3	K5	23 42 26.217	0.10	2	71.254	-0 56 17.04	0.61	2	71.254				18260
22733	-31	19434	9.1	F5	42 44.128	0.05	4	69.112	-30 48 38.63	0.13	4	69.112				18261
22734	-14	6536	7.84	F0	42 47.006	0.15	2	70.769	-13 57 35.24	0.21	2	70.769		32976		18262
22735	-35	15919	9.3	F5	42 48.955	0.18	4	70.971	-35 15 31.80	0.18	4	70.971				18263
22736	-2	6032	8.9	F8	42 50.342	0.10	2	71.714	-2 13 22.98	0.14	2	71.714				18264
22737	-52	12212	8.0	K0	23 43 02.760	0.05	4	69.228	-52 30 43.93	0.14	4	69.228				18265
22738	-46	14759	8.0	G5	43 12.117	0.12	4	70.182	-46 10 19.75	0.13	4	70.182				2832
22739	+0	5042	8.9	F0	43 13.877	0.02	2	70.539	+1 23 40.17	0.16	2	70.539				18266
22740	-59	7918	9.1	K0	43 14.006	0.15	4	69.265	-58 38 51.67	0.23	4	69.265				18267
22741	-43	15488	8.0	K2	43 14.644	0.19	4	70.408	-42 37 08.16	0.24	4	70.408				2833
22742	-67	3980	8.38	F0	23 43 16.209	0.20	4	69.273	-67 07 50.53	0.08	4	69.273		32981		20472
22743	-15	6491	7.8	K2	43 17.438	0.22	2	71.710	-15 01 57.06	0.40	2	71.710				18268
22744	-78	1483	8.9	K0	43 21.327	0.09	4	69.874	-77 50 49.76	0.14	4	69.874				20473
22744	SP				43 21.341	0.18	4	70.177	-77 50 49.41	0.14	4	70.177				20473
22745	-40	15238	9.0	K0	43 22.035	0.11	5	71.195	-40 01 33.06	0.21	5	71.195				2834
22746	-11	6135	8.4	F	23 43 24.896	0.04	2	71.701	-10 48 09.56	0.18	2	71.701				18269
22747	-50	14040	9.5	K0	43 29.363	0.08	4	69.773	-50 12 59.68	0.06	4	69.773				2835
22748	-17	6814	8.8	K5	43 29.495	0.15	2	71.691	-17 24 49.34	0.14	2	71.691				18270
22749	-55	10090	9.1	K0	43 33.029	0.13	4	69.779	-55 16 48.94	0.10	4	69.779				18271
22750	-14	6540	8.0	G5	43 43.872	0.07	2	71.222	-13 38 32.22	0.27	2	71.222		32992		18272
22751	+2	4709	5.30	N0	23 43 50.074	0.13	6	69.097	+3 12 33.37	0.14	6	69.097	3908	32995	5214	33908
22752	-68	3580	8.8	K0	43 50.484	0.17	4	69.915	-68 20 02.71	0.21	4	69.915				20474
22753	-45	15130	7.46	K0	43 54.695	0.06	4	70.720	-45 06 22.78	0.10	4	70.720		32999		2836
22754	-13	6461	8.6	K0	43 59.928	0.22	2	71.227	-13 02 06.12	0.08	2	71.227				18273
22755	-0	4566	7.35	G5	44 00.909	0.10	3	72.082	+0 15 08.92	0.37	3	72.082		33000		18274

22694 A 16946, 11.3m, 4^h3, 240°.22754 8.9m-10.9m, 0^h7, 306°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
22756	-32	17662	9.3	G5	23 44 08.221	0.18	3	70.328	-32 16 43.33	0.21	3	70.328				18275
22757 ^p	-60	7682	8.9	K0	44 10.101	0.24	4	70.145	-60 12 39.16	0.18	4	70.145				18276
22758	-29	18837	8.7	K5	44 11.638	0.20	4	68.974	-29 03 50.93	0.25	4	68.974				18277
22759	-73	2313	7.99	F5	44 17.916	0.15	4	69.510	-73 22 38.26	0.15	4	69.510		33005		20475
22760	-44	15357	8.8	K0	44 22.017	0.09	4	70.438	-43 43 39.82	0.15	4	70.438				2837
22761	-84	658	7.86	K0	23 44 24.647	0.12	4	69.514	-84 08 23.76	0.10	4	69.514		33008		20476
22761 ^{SP}					44 24.613	0.09	4	69.795	-84 08 23.56	0.28	4	69.795		33008		20476
22762	-17	6816	8.7	K0	44 32.334	0.27	2	70.758	-17 22 38.26	0.31	2	70.758				18278
22763	-22	6191	8.8	F8	44 34.344	0.09	4	68.973	-21 47 15.41	0.09	4	68.973				18279
22764	-50	14047	5.37	B5	44 37.281	0.24	7	69.764	-50 30 15.29	0.10	7	69.764	3910	33012	5215	33910
22765	-69	3335	7.18	F2	23 44 38.872	0.09	6	69.388	-68 40 17.78	0.10	6	69.388	3911	33013		33911
22766	-68	3582	8.3	A3	44 45.342	0.12	4	69.063	-67 59 53.82	0.17	4	69.063				20477
22767	+ 2	4710	8.7	G5	44 46.205	0.34	2	71.203	+ 2 36 40.63	0.61	2	71.203				18280
22768	- 4	5955	8.5	F2	44 49.487	0.14	2	71.711	- 4 10 51.76	0.03	2	71.711				18281
22769	-38	15626	7.85	G5	44 54.412	0.07	4	71.081	-38 26 03.46	0.16	4	71.081		33017		18282
22770	-18	6370	8.8	F0	23 44 56.610	0.28	2	71.207	-18 13 14.11	0.29	2	71.207				18283
22771	-36	16038	9.7	K2	44 56.820	0.18	4	71.629	-35 53 55.67	0.34	4	71.629				18284
22772	-10	6169	8.2	F8	45 04.353	0.15	2	71.210	-10 12 30.68	0.14	2	71.210				18285
22773	- 1	4489	7.20	K0	45 08.179	0.07	2	71.755	- 1 02 23.37	0.12	2	71.755			5216	18286
22774	-26	16784	8.8	G5	45 08.993	0.18	4	69.470	-26 27 49.75	0.19	4	69.470				18287
22775	+ 3	4895	8.2	K0	23 45 11.348	0.11	2	71.761	+ 3 57 07.65	0.09	2	71.761		33024		18288
22776	-23	18043	8.0	K0	45 15.183	0.15	6	70.254	-23 18 14.12	0.10	6	70.254				18289
22777	-57	10351	8.9	K2	45 18.719	0.10	4	69.001	-57 28 08.03	0.12	4	69.001				18290
22778	-35	15938	8.5	G5	45 19.628	0.09	4	70.604	-34 35 11.85	0.14	4	70.604				18291
22779	-14	6550	8.1	K0	45 21.579	0.18	2	72.071	-14 11 39.31	0.11	2	72.071				18292
22780	- 3	5707	5.60	K0	23 45 22.399	0.03	89	71.330	- 3 02 22.48	0.03	89	71.330	1623	33029	5217	81623
22781	-19	6513	7.6	K0	45 55.559	0.06	2	70.530	-19 09 44.68	0.25	2	70.530		33038		18293
22782	-39	15157	8.6	K5	45 57.937	0.17	4	71.368	-39 22 34.56	0.16	4	71.368				18294
22783	- 7	6086	6.27	K2	45 58.300	0.10	6	69.713	- 6 39 29.67	0.16	6	69.713	3912	33039		33912
22784	-59	7923	9.1	M0	45 59.167	0.21	4	70.003	-59 20 08.40	0.17	4	70.003				18295
22785	-32	17680	8.7	K2	23 46 02.563	0.12	4	70.408	-32 26 30.06	0.21	4	70.408				18296
22786	- 5	6056	7.7	K2	46 11.091	0.1	2	71.266	- 5 42 47.92	0.08	2	71.266				18297
22787	- 8	6194	9.2	F2	46 11.656	0.21	2	71.833	- 8 25 25.01	0.20	2	71.833				18298
22788	-12	6567	8.8	K0	46 16.331	0.64	2	71.825	-11 44 10.42	0.25	2	71.825				18299
22789	-51	13687	8.19	G5	46 19.124	0.20	4	68.967	-51 05 13.32	0.08	4	68.967		33049		2838
22790	-28	18353	4.64	A0	23 46 19.614	0.04	31	70.898	-28 24 26.83	0.05	31	70.898	896	33050	5219	30896
22791 [*]	-47	14704	8.5	--	46 38.399	0.28	4	70.455	-47 24 17.33	0.34	4	70.455				2839
22792	-28	18361	7.03	F8	46 44.068	0.11	4	70.370	-28 07 55.04	0.07	4	70.370		33055	5220	18300
22793	-22	6199	7.14	K0	46 50.827	0.04	50	70.790	-21 53 31.60	0.04	50	70.790	1624	33058	5221	81624
22794	-21	6483	8.7	K0	46 51.128	0.09	4	70.936	-20 43 15.22	0.09	4	70.936				18301
22795	-32	17682	8.1	K0	23 46 56.726	0.05	4	71.237	-31 40 51.65	0.05	4	71.237				18302
22796	-16	6373	6.41	K0	46 56.753	0.03	2	71.824	-16 08 20.74	0.08	2	71.824		33060	5222	18303
22797	- 6	6297	8.0	G5	46 58.464	0.25	2	71.196	- 5 49 51.71	0.19	2	71.196				18304
22798	-57	10360	8.8	G5	47 06.698	0.14	4	68.685	-56 40 09.75	0.04	4	68.685				18305
22799	+28	4649	5.91	A3	47 07.314	0.11	6	69.872	+28 33 50.87	0.07	6	69.872	3913	33062	5223	33913
22800	-24	17870	8.5	F2	23 47 22.411	0.13	4	69.856	-24 26 37.36	0.07	4	69.856				18306
22801	-30	19700	8.8	K5	47 27.050	0.17	4	70.625	-30 05 18.11	0.07	4	70.625				18307
22802	+ 2	4723	8.4	G5	47 31.266	0.01	2	71.227	+ 2 35 51.24	0.02	2	71.227		33070		18308
22803	-11	6146	6.70	F2	47 31.776	0.16	2	71.695	-11 22 51.80	0.35	2	71.695		33071		18309
22804	-27	16463	8.9	K2	47 33.828	0.06	4	70.467	-27 24 26.69	0.16	4	70.467				18310
22805	+ 1	4780	8.6	K2	23 47 34.251	0.11	2	71.854	+ 1 41 32.37	0.11	2	71.854				18311
22806	-10	6176	8.9	A2	47 35.992	0.02	2	71.759	- 9 50 17.84	0.37	2	71.759				18312
22807	-35	15959	8.9	K0	47 36.720	0.05	4	70.125	-34 43 47.87	0.16	4	70.125				18313
22808 [*]	-18	6378	8.9	F5	47 37.750	0.04	2	72.119	-17 39 16.35	0.59	2	72.119				18314
22809	-10	6177	6.08	K0	47 40.130	0.04	35	71.715	-10 15 10.30	0.04	34	71.739	897	33074	5224	30897
22810	-48	14618	8.5	G5	23 47 41.119	0.09	4	71.170	-47 43 55.21	0.05	4	71.170				2840
22811	-36	16051	8.4	K2	47 45.463	0.16	4	71.343	-36 15 15.24	0.12	4	71.343				18315
22812	-15	6505	6.96	K0	47 52.307	0.12	2	72.156	-14 51 26.19	0.15	2	72.156		33077		18316
22813	-13	6471	7.9	K0	47 56.222	0.20	2	71.833	-13 23 18.95	0.10	2	71.833				18317
22814	-21	6486	7.25	A2	47 59.201	0.06	4	71.175	-20 30 40.28	0.07	4	71.175		33082	5226	18318
22815	-36	16054	9.6	F0	23 48 02.463	0.13	4	70.509	-35 51 33.05	0.16	4	70.509				18319
22816	-80	1078	7.91	G0	48 04.926	0.16	4	70.238	-80 10 36.37	0.23	4	70.238		33083		20478
22816 ^{SP}					48 05.053	0.14	4	69.787	-80 10 36.36	0.20	4	69.787		33083		20478
22817	-26	16806	8.7	G0	48 07.284	0.15	4	71.411	-26 11 10.69	0.19	4	71.411				18320
22818	-51	13695	8.7	A2	48 08.198	0.18	4	69.433	-50 53 30.13	0.05	4	69.433				2841
22819	-16	6376	8.8	K0	23 48 15.095	0.13	2	72.122	-16 24 07.61	0.15	2	72.122				18321
22820	-59	7926	8.3	K0	48 19.016	0.11	4	69.998	-59 31 17.31	0.14	4	69.998				18322
22821	-37	15401	8.8	F0	48 20.005	0.10	4	70.647	-37 10 02.20	0.20	4	70.647				18323
22822	-49	14270	6.91	K0	48 23.775	0.15	6	70.497	-48 56 14.77	0.11	6	70.497	3915	33086		2842
22823	-42	16493	7.72	K2	48 26.442	0.20	4	70.646	-41 52 41.19	0.17	4	70.646		33087		2843
22824	-66	3803	8.25	G5	23 48 29.245	0.14	4	70.490	-65 35 36.27	0.18	4	70.490		33088		20479
22825	- 3	5718	8.5	K0	48 35.916	0.06	2	71.003	- 2 47 53.62	0.14	2	71.003				18324
22826	-44	15376	8.5	K0	48 42.432	0.07	4	71.085	-43 51 43.22	0.12	4	71.085				2844
22827	-30	19710	8.9	K2	48 44.008	0.09	4	70.994	-30 14 46.58	0.18	4	70.994				18325
22828	-77	1592	8.5	K0	48 45.377	0.13	4	70.702	-76 37 51.70	0.34	4	70.702				20480

22757 SDS, 11.3m, 6"3, 55°.
22791 SDS, 9.2m-10.8m, 1"2, 149°.

22808 A 17031, 9.3m-10.0m, 0"8, 318°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
22828	SP				23 48 45.250	0.26	4	69.787	-76 37 51.89	0.18	4	69.787				20480
22829		-41 15336	8.5	K0	48 45.638	0.11	4	71.419	-40 45 47.84	0.19	4	71.419				2845
22830		-4 5965	8.0	K5	48 54.931	0.04	2	72.382	-3 40 55.61	0.05	2	72.382				18326
22831		-21 6488	8.6	K5	48 57.824	0.16	4	70.945	-21 03 36.80	0.19	4	70.945				18327
22832		-71 2777	8.9	K5	48 58.905	0.08	3	69.976	-71 08 55.79	0.13	3	69.976				20481
22833		-73 2322	8.8	K2	23 48 59.436	0.15	3	70.380	-73 28 03.22	0.31	3	70.380				20482
22834		-54 10376	8.9	K0	49 01.367	0.14	4	70.686	-54 10 16.17	0.21	4	70.686				18328
22835		-35 15973	6.67	G5	49 03.454	0.09	6	69.704	-34 58 10.26	0.09	6	69.704	3917	33101	5229	33917
22836		-14 6563	9.0	A0	49 03.585	-	1	71.554	-14 15 47.08	-	1	71.554				18329
22837		-79 1242	9.2	K0	49 05.308	0.14	4	70.287	-79 26 25.14	0.18	4	70.287				20483
22837	SP				23 49 05.169	0.24	4	70.763	-79 26 25.03	0.21	4	70.763				20483
22838		+3 4899	7.05	K2	49 06.706	-	1	71.885	+4 25 10.33	-	1	71.885		33103		18330
22839		-43 15525	7.26	K0	49 10.151	0.15	4	71.233	-42 57 04.48	0.15	4	71.233		33105		2846
22840		-82 905	5.10	G5	49 13.575	0.02	172	70.860	-82 17 48.89	0.03	172	70.860	3997	33107	5230	63997
22840	SP				49 13.581	0.02	204	70.997	-82 17 48.73	0.04	192	70.953	3997	33107	5230	73997
22841		-45 15159	9.0	K2	23 49 13.960	0.13	4	71.407	-44 47 01.23	0.17	4	71.407				2847
22842		-33 16732	6.95	K0	49 19.389	0.16	4	71.178	-33 24 01.15	0.15	4	71.178		33108		18331
22843		+2 4725	5.85	K2	49 24.186	0.11	6	70.347	+2 39 08.43	0.16	6	70.347	3918	33112	5231	33918
22844		-53 10540	7.90	K0	49 35.412	0.15	4	70.634	-52 36 38.64	0.17	4	70.634		33114		18332
22845		-46 14794	8.5	G5	49 42.442	0.14	3	71.077	-46 24 23.80	0.08	3	71.077				2848
22846		+0 5064	8.4	F0	23 49 43.093	0.07	2	72.232	+1 13 13.50	0.21	2	72.232				18333
22847		+18 5231	5.23	M0	49 56.428	0.08	6	70.438	+18 50 32.70	0.13	5	70.341	898	33119	5232	30898
22848		+10 5004	5.39	A3	50 03.873	0.05	28	70.749	+10 40 09.17	0.07	28	70.749	1625	33122	5233	81625
22849		-19 6527	6.68	A0	50 05.202	0.17	2	72.132	-18 50 24.53	0.11	2	72.132		33123		18334
22850		-25 16678	6.87	K2	50 05.945	0.06	4	69.138	-25 15 48.60	0.17	4	69.138		33124		18335
22851		-17 6836	8.1	M2	23 50 06.937	-	1	70.653	-16 39 10.58	-	1	70.653				18336
22852		-9 6275	8.0	K0	50 10.701	-	1	72.771	-9 10 22.85	-	1	72.771				18337
22853		-57 10374	8.82	A5	50 13.974	0.30	4	71.135	-57 03 07.48	0.23	4	71.135		33127		18340
22854		-74 2108	8.5	G5	50 20.076	0.35	4	70.920	-74 12 29.31	0.09	4	70.920				20484
22855		-47 14721	8.5	K0	50 22.590	0.07	3	70.034	-46 47 28.36	0.11	3	70.034				2849
22856		-29 18870	8.6	K0	23 50 24.514	0.09	3	69.461	-28 37 56.80	0.06	3	69.461				18341
22857		-40 15280	9.0	G5	50 26.009	0.26	3	70.272	-40 17 31.54	0.12	3	70.272				2850
22858		-67 3986	9.1	G0	50 30.568	0.17	3	70.117	-66 55 29.31	0.11	3	70.117				20485
22859		-55 10112	7.58	K0	50 31.307	0.21	4	70.018	-54 38 42.89	0.12	4	70.018		33137		18342
22860		-7 6104	8.4	K0	50 32.965	-	1	72.637	-6 55 41.13	-	1	72.637				18343
22861		+4 5064	8.8	G5	23 50 38.560	0.23	2	72.192	+4 52 45.75	0.10	2	72.192		33139		18344
22862		-50 14071	8.04	F0	51 03.442	0.14	4	70.926	-49 42 39.26	0.05	4	70.926		33146		2851
22863		+1 4795	8.8	G0	51 06.645	0.04	2	71.709	+2 27 11.67	0.40	2	71.709				18345
22864		-30 19728	7.45	K5	51 09.071	0.10	4	69.933	-29 40 29.52	0.25	4	69.933		33147		18346
22865		-50 14073	8.5	K0	51 13.336	0.25	4	70.197	-50 16 40.66	0.23	4	70.197				2852
22866		-45 15168	9.0	F5	23 51 15.681	0.23	3	71.008	-45 24 05.05	0.35	3	71.008				2853
22867		-0 4581	8.0	M0	51 18.391	0.34	2	70.530	+0 19 05.03	0.19	2	70.530				18347
22868		-32 17714	9.1	K2	51 24.813	0.09	4	70.183	-32 04 18.42	0.05	4	70.183				18348
22869		+4 5066	8.0	K0	51 31.627	0.18	2	71.263	+4 35 35.68	0.31	2	71.263				18349
22870		-75 1818	8.3	M0	51 38.066	0.11	4	69.581	-74 54 06.17	0.18	4	69.581				20486
22871		-16 6385	8.9	K0	23 51 45.178	0.17	2	72.029	-15 55 00.50	0.13	2	72.029				18350
22872		-31 19497	8.8	K0	51 47.407	0.14	4	70.271	-31 17 03.24	0.07	4	70.271				18351
22873		-63 4935	9.0	M0	51 55.355	0.14	4	69.941	-63 08 45.37	0.25	4	69.941				18352
22874		-33 16757	9.3	G5	52 00.839	0.12	4	71.677	-33 24 49.58	0.09	4	71.677				18353
22875		-40 15285	6.01	F8	52 02.267	0.03	75	71.375	-40 34 43.11	0.04	74	71.381	1626	33162	5237	31626
22876		-23 18084	8.9	F5	23 52 04.392	0.13	4	70.147	-23 18 38.56	0.11	4	70.147				18354
22877		-2 6059	7.74	K5	52 04.839	0.13	2	71.744	-2 13 28.04	0.07	2	71.744				18355
22878		-0 4585	5.98	M3	52 12.929	0.12	6	70.385	-0 10 08.05	0.07	6	70.385	3920	33165	5238	33920
22879		-62 6453	9.1	K0	52 15.401	0.13	4	69.970	-62 24 45.46	0.16	4	69.970				18356
22880		-42 16515	8.5	G0	52 17.337	0.14	4	71.159	-42 16 32.77	0.31	4	71.159				2854
22881		-1 4500	8.6	G5	23 52 18.904	0.02	2	71.705	-0 33 47.38	0.25	2	71.705				18357
22882		-20 6668	7.9	F5	52 23.745	0.10	4	69.917	-20 19 25.60	0.10	4	69.917				18358
22883		+3 4902	9.4	K0	52 26.905	0.17	3	69.921	+4 11 27.25	0.13	3	69.921				28507
22884		-10 6198	6.80	F0	52 29.684	0.00	2	70.763	-9 44 20.29	0.14	2	70.763		33169		18359
22885		-9 6285	9.0	G0	52 32.973	0.22	2	72.097	-8 43 11.21	0.17	2	72.097				18360
22886		-5 6081	7.96	K0	23 52 33.839	0.29	2	71.247	-4 56 46.55	0.45	2	71.247		33171		18361
22887		-32 17723	6.05	B3	52 41.670	0.10	6	69.658	-32 11 59.50	0.19	6	69.658	3921	33175	5241	33921
22888		+2 4730	8.2	K0	52 47.489	0.40	2	71.783	+2 57 41.33	0.15	2	71.783				18362
22889		-50 14076	7.77	K0	52 47.817	0.19	4	69.022	-50 23 31.93	0.19	4	69.022		33177		2855
22890		-40 15290	9.0	F2	52 49.341	0.18	4	70.630	-40 02 32.54	0.12	4	70.630				2856
22891		-18 6397	7.9	F5	23 52 51.234	0.32	2	72.069	-18 06 17.72	0.30	2	72.069				18363
22892		-15 6521	9.0	G0	52 56.049	0.01	2	72.123	-15 07 24.55	0.00	2	72.123				18364
22893		-28 18394	8.7	K2	52 56.920	0.05	4	70.180	-27 42 57.46	0.15	4	70.180				18365
22894		+2 4731	8.0	G5	52 59.155	0.13	2	72.149	+3 13 31.49	0.16	2	72.149		33180		18366
22895		-27 16487	8.6	G5	53 00.522	0.08	3	69.765	-26 52 51.00	0.16	3	69.765				18367
22896		-21 6498	7.9	G0	23 53 00.553	0.20	4	69.840	-21 13 54.31	0.14	4	69.840				18368
22897		-61 6781	8.8	K0	53 03.651	0.18	4	69.004	-61 15 29.03	0.15	4	69.004				18369
22898		-11 6161	8.7	G5	53 03.868	0.18	2	72.175	-11 04 09.52	0.05	2	72.175				18370
22899		-38 15679	8.37	K0	53 05.368	0.09	4	70.916	-38 20 41.24	0.12	4	70.916		33186		18371
22900		-36 16096	9.6	K5	53 05.627	0.14	4	71.383	-36 20 45.06	0.09	4	71.383				18372

22862 SDS, 8.8m-8.9m, 0^h1.22883 A 17096AB, 9.5m-9.6m, 0^h8, 215°.

SEVEN-INCH TRANSIT CIRCLE OBSERVATIONS, 1967-1973

No	DM	Number	m _v	Sp	R A 1950.0	ε _α	N _α	Epoch _α	Decl 1950.0	ε _δ	N _δ	Epoch _δ	FK4	GC	N30	No*
22901	- 9	6287	7.8	G5	23 53 10.308	0.13	2	72.162	- 9 20 23.55	0.13	2	72.162				18373
22902	-14	6579	8.0	F5	53 14.319	0.09	2	71.698	-14 14 42.21	0.38	2	71.698				18374
22903	-25	16700	8.5	G5	53 19.636	0.06	4	70.729	-24 39 32.27	0.14	4	70.729				18375
22904	-11	6164	8.7	K2	53 22.360	0.10	2	71.347	-11 08 38.46	0.02	2	71.347				18376
22905	-48	14644	8.8	K0	53 24.958	0.14	4	70.632	-48 13 18.92	0.12	4	70.632				2857
22906	-53	10550	7.16	G5	23 53 31.459	0.15	4	70.195	-53 03 58.84	0.07	4	70.195	33193			18377
22907	-26	16842	8.2	K0	53 32.498	0.16	4	69.536	-26 11 11.19	0.08	4	69.536				18378
22908	-22	6225	7.36	M0	53 32.760	0.10	4	69.287	-22 16 13.73	0.12	4	69.287	33196			18379
22909	-18	6402	8.8	A2	53 33.686	0.21	2	70.520	-18 17 06.23	0.46	2	70.520				18380
22910	-14	6581	9.0	F5	53 41.262	0.01	2	71.732	-13 47 21.84	0.13	2	71.732				18381
22911	-47	14745	9.0	F0	23 53 45.276	0.13	4	70.440	-46 50 53.85	0.05	4	70.440				2858
22912	- 0	4592	8.8	F0	53 52.791	0.02	2	71.751	+ 0 12 10.92	0.33	2	71.751				18382
22913	- 6	6322	8.9	K0	53 53.156	0.22	2	72.030	- 6 15 22.73	0.12	2	72.030				18383
22914	- 1	4504	8.9	K0	53 53.936	0.16	2	71.849	- 1 12 38.07	0.17	2	71.849				18384
22915	-25	16707	6.33	G5	53 55.509	0.07	6	69.956	-25 00 56.32	0.13	6	69.956	3922	33200		33922
22916	+ 1	4804	9.0	F8	23 53 56.894	0.02	2	70.752	+ 1 38 25.37	0.09	2	70.752				18385
22917	-56	10184	8.23	K0	53 58.689	0.29	4	69.284	-55 58 27.45	0.19	4	69.284				18386
22918	-83	760	8.12	K0	53 59.180	0.07	4	69.885	-83 15 45.28	0.15	4	69.885				20487
22918	SP				53 59.006	0.23	4	70.214	-83 15 45.03	0.19	4	70.214				20487
22919	-60	7701	8.8	K2	54 00.824	0.25	4	69.534	-59 48 40.65	0.13	4	69.534				18387
22920	-17	6848	9.2	K0	23 54 06.583	0.20	2	71.224	-17 20 11.08	0.21	2	71.224				18388
22921	-57	10383	7.46	K0	54 07.705	0.29	4	69.667	-57 25 36.21	0.10	4	69.667				18389
22922	+21	4999	6.30	M0	54 08.332	0.04	30	71.766	+22 22 11.48	0.10	30	71.766	1628	33208	5243	31628
22923	-61	6786	9.1	G5	54 27.218	0.13	4	69.898	-60 40 54.58	0.21	4	69.898				18390
22924	- 8	6213	8.7	G5	54 27.502	0.04	2	71.145	- 7 37 56.86	0.10	2	71.145				18391
22925	-58	8117	7.9	K0	23 54 28.207	0.08	4	69.960	-58 24 38.18	0.21	4	69.960				18392
22926	-63	4940	6.04	A2	54 43.478	0.14	6	70.292	-63 14 06.40	0.12	6	70.292	3924	33215	5244	33924
22927	-43	15551	8.5	F2	54 47.123	0.10	5	70.655	-42 43 21.84	0.15	5	70.655				2859
22928	-37	15436	7.42	K0	54 54.158	0.17	4	70.620	-36 59 01.85	0.07	4	70.620				18393
22929	-42	16533	8.0	K0	54 55.945	0.13	4	70.939	-41 37 16.78	0.07	4	70.939				2860
22930	-10	6206	7.83	G0	23 54 58.649	0.10	2	70.754	- 9 55 29.27	0.00	2	70.754				18394
22931	+24	4865	4.75	M0	55 12.314	0.04	47	71.143	+24 51 47.95	0.06	47	71.143	1629	33230	5249	81629
22932	-67	3991	7.4	F2	55 16.844	0.20	4	69.978	-67 17 03.64	0.17	4	69.978				20488
22933	-39	15210	7.02	K2	55 24.637	0.09	4	70.442	-39 13 56.78	0.06	4	70.442				18395
22934	- 2	6067	8.7	G5	55 29.045	0.04	2	71.210	- 2 15 30.33	0.05	2	71.210				18396
22935	-33	16786	9.1	F5	23 55 34.075	0.02	3	70.612	-33 24 38.54	0.02	3	70.612				18397
22936	- 4	5989	8.9	K0	55 35.364	0.02	2	71.769	- 4 15 27.14	0.04	2	71.769				18398
22937	-12	6592	7.9	G5	55 42.290	0.16	2	71.780	-11 44 11.62	0.40	2	71.780				18399
22938	-38	15694	8.3	K0	55 44.559	0.04	4	70.651	-37 50 09.95	0.18	4	70.651				18400
22939	-16	6394	6.40	K2	55 47.030	0.04	8	69.803	-16 07 32.82	0.07	8	69.803	3925	33242	5251	33925
22940	-44	15410	8.5	G5	23 55 49.367	0.05	4	71.289	-44 12 39.38	0.27	4	71.289				2861
22941	- 4	5992	8.5	F8	55 49.766	0.07	2	72.181	- 3 37 57.69	0.11	2	72.181				18402
22942	+ 2	4739	8.6	K0	55 49.854	0.04	2	72.250	+ 3 17 31.55	0.47	2	72.250				18403
22943	-34	16251	8.3	K0	55 54.947	0.20	4	71.013	-34 33 51.03	0.06	4	71.013				18404
22944	-57	10389	6.70	G0	55 55.928	0.10	6	70.203	-57 33 32.99	0.11	6	70.203	3926	33246	5253	33926
22945	-24	17934	7.9	A2	23 55 57.082	0.11	4	68.919	-24 26 52.09	0.15	4	68.919				18405
22946	-29	18903	8.4	K0	55 59.363	0.18	4	69.403	-29 29 19.46	0.15	4	69.403				18406
22947	-13	6495	8.4	F0	55 59.873	0.08	2	72.288	-12 44 44.03	0.07	2	72.288				18407
22948*	-14	6588	7.18	F0	56 00.489	0.31	2	71.844	-14 24 12.54	0.13	2	71.844				18408
22949†	- 4	5996	5.07	K0	56 06.666	0.06	15	71.566	- 3 50 01.71	0.12	13	71.666	900	33248	5254	30900
22950	-54	10405	8.9	K0	23 56 07.786	0.22	4	70.394	-54 05 53.59	0.15	4	70.394				18409
22951	-32	17753	8.4	K0	56 14.537	0.13	4	69.724	-31 45 29.18	0.26	4	69.724				18410
22952	-20	6682	7.5	K0	56 17.136	-	1	71.885	-19 55 50.18	-	1	71.885				18411
22953	-53	10561	5.14	K0	56 20.902	0.04	60	70.958	-53 01 29.24	0.04	60	70.958	901	33256	5255	30901
22954	-70	3032	8.2	K2	56 25.984	0.13	4	70.742	-69 55 58.33	0.06	4	70.742				20489
22955	-55	10126	8.8	K2	23 56 28.416	0.11	4	71.208	-54 55 29.24	0.05	4	71.208				18413
22956	-46	14822	8.2	K0	56 34.744	0.38	2	70.243	-46 24 26.08	0.43	2	70.243				2862
22957	-66	3818	9.28	K0	56 44.593	0.29	4	70.673	-65 48 03.15	0.07	4	70.673				20490
22958	+ 6	5227	4.03	F5	56 44.713	0.07	7	71.358	+ 6 35 09.05	0.12	7	71.358	902	33262	5257	30902
22959	-17	6856	8.7	G5	56 51.641	-	1	70.653	-17 13 22.09	-	1	70.653				18416
22960	-53	10564	7.7	F0	23 56 57.444	0.16	4	70.750	-53 07 18.79	0.08	4	70.750				18418
22961	-42	16548	7.84	K0	56 59.942	0.12	4	71.197	-42 33 41.93	0.28	4	71.197				2863
22962	-50	14095	9.0	G0	57 04.270	0.18	4	71.469	-50 06 38.77	0.25	4	71.469				2864
22963	-35	16020	9.0	G5	57 07.907	0.23	4	70.445	-35 16 35.03	0.30	4	70.445				18419
22964	-25	16732	7.83	K0	57 09.832	0.12	4	70.067	-24 55 24.80	0.16	4	70.067				18420
22965	-32	17763	8.2	G5	23 57 10.602	0.12	5	71.207	-32 29 19.90	0.18	5	71.207				18421
22966	- 2	6072	8.1	G5	57 15.185	0.04	2	71.269	- 2 23 27.17	0.09	2	71.269				18422
22967	-38	15704	9.1	K0	57 15.559	0.18	3	70.846	-38 08 10.90	0.11	3	70.846				18423
22968	-19	6553	8.7	K0	57 16.248	0.03	3	72.152	-18 47 08.47	0.37	3	72.152				18424
22969	-66	3819	4.71	B9	57 20.076	0.04	60	70.755	-65 51 19.59	0.04	60	70.755	903	33280	5259	30903
22970	-41	15372	8.5	G5	23 57 28.289	0.14	4	70.693	-40 52 10.72	0.09	4	70.693				2865
22971	-36	16128	8.52	K5	57 35.809	0.09	4	70.649	-36 14 19.14	0.23	4	70.649				18425
22972	-23	18112	8.4	K0	57 36.095	0.10	4	68.995	-22 52 22.83	0.25	4	68.995				18426
22973	-50	14096	8.8	K0	57 42.737	0.15	4	70.905	-49 37 50.62	0.12	4	70.905				2866
22974	-44	15421	8.5	F5	57 46.896	0.46	4	71.058	-43 38 24.63	0.12	4	71.058				2867

22948 8.0m-8.0m, 0°2, 14°.

22949 A 17137, 9.0m, 1°5, 280°.

CATALOG OF 23,001 STARS FOR 1950.0

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No	DM	Number	m_v	Sp	R A 1950.0	ϵ_α	N_α	Epoch $_\alpha$	Decl 1950.0	ϵ_δ	N_δ	Epoch $_\delta$	FK4	GC	N30	No*
22975	-49	14311	8.8	K0	23 57 47.959	0.18	4	70.696	-49 23 11.21	0.11	4	70.696				2868
22976	+ 1	4814	8.0	K2	57 49.795	0.06	2	71.733	+ 2 23 49.70	0.05	2	71.733				18427
22977	- 4	6003	8.3	K2	57 58.048	0.14	2	71.752	- 3 35 05.63	0.07	2	71.752				18428
22978	- 0	4603	8.1	K0	58 05.256	0.23	2	71.244	- 0 03 19.70	0.37	2	71.244			5261	18429
22979	-65	4190	8.3	F5	58 07.945	0.10	4	69.945	-64 44 39.91	0.16	4	69.945				20491
22980	-46	14833	8.0	G5	23 58 09.248	0.05	4	70.692	-45 42 04.28	0.24	4	70.692				2869
22981	-28	18431	8.0	K0	58 10.458	0.10	4	69.419	-28 11 09.23	0.09	4	69.419				18430
22982	- 5	6097	8.7	G5	58 25.020	0.09	2	70.747	- 5 12 34.13	0.01	2	70.747	33303			18431
22983	- 6	6342	8.1	K0	58 33.591	0.05	2	70.537	- 6 09 09.54	0.11	2	70.537	33307			18432
22984	-21	6516	8.5	G5	58 35.935	0.10	4	70.026	-20 59 02.71	0.29	4	70.026				18433
22985	-69	3344	8.3	F8	23 58 43.588	0.13	4	70.233	-68 38 57.42	0.16	4	70.233				20492
22986	-70	3036	8.5	K2	58 47.013	0.06	4	70.246	-70 24 14.08	0.17	4	70.246				20493
22987	-34	16269	8.6	F5	58 56.385	0.09	4	70.779	-34 04 15.53	0.14	4	70.779				18434
22988	-73	2341	8.5	G5	58 57.686	0.26	4	70.011	-72 53 04.24	0.30	4	70.011				20494
22989	-46	14836	8.5	K0	59 01.389	0.12	4	70.138	-45 37 22.81	0.16	4	70.138				2871
22990	+ 4	5080	8.7	K5	23 59 01.913	0.21	2	71.205	+ 4 46 35.53	0.21	2	71.205				18435
22991	-77	1596	4.73	K0	59 02.808	0.05	50	70.677	-77 20 34.03	0.04	50	70.677	904	33321	5264	30904
22991 SP					59 02.818	0.06	57	70.853	-77 20 34.12	0.09	56	70.860	904	33321	5264	50904
22992	-31	19557	9.0	K0	59 06.656	0.07	4	69.253	-30 58 15.01	0.26	4	69.253				18436
22993	-37	15469	7.03	K0	59 21.679	0.07	7	70.738	-37 30 28.84	0.05	6	70.708	3931	33328	5266	33931
22994	- 6	6345	4.66	M3	23 59 23.785	0.04	34	71.812	- 6 17 31.92	0.06	34	71.812	1630	33330	5267	31630
22995	- 3	5750	6.85	A3	59 28.806	0.03	2	71.769	- 3 02 40.44	0.12	2	71.769		33333		18437
22996	-57	10405	8.8	G5	59 31.863	0.26	4	69.724	-56 47 35.78	0.37	4	69.724				18438
22997	-14	6603	7.03	F8	59 42.475	0.13	2	71.344	-13 41 10.28	0.38	2	71.344		33335		18439
22998	- 9	6309	8.4	K0	59 43.302	0.26	2	72.041	- 9 27 11.32	0.12	2	72.041				18440
22999	-30	19790	4.99	B5	23 59 46.296	0.13	6	71.531	-29 59 56.22	0.14	6	71.531	3932	33337		33932
23000	-39	15238	9.4	G5	59 55.646	0.11	3	69.952	-39 29 26.86	0.13	3	69.952				18441
23001	+ 7	5121	5.78	F0	59 56.062	0.17	5	72.093	+ 8 12 26.70	0.11	5	72.093	3933	33341	5268	33933

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